SERVICE MANUAL

BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-28WF1A	RM-839	Italian	SCC-K05Q-A
KV-28WF1B	RM-839	French	SCC-K01S-A
KV-28WF1D	RM-839	AEP	SCC-K07T-A
KV-28WF1E	RM-839	Spanish	SCC-K06S-A
KV-28WF1K	RM-839	OIRT	SCC-K20H-A
KV-28WF1R	RM-839	OIRT	SCC-K20G-A
KV-28WF1U	RM-839	UK	SCC-K04N-A

MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20, A-H, H1,H2 UHF: E21-E69	PAL NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
UK	I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)

MODEL	28WF1A	28WF1B	28WF1D	28WF1E	28WF1K	28WF1R	28WF1U
Power Consumption	84W	95W	95W	95W	95W	95W	146W

SPECIFICATIONS

Picture Tube — Super Trinitron
Approx. 71 cm (28 inches)
(Approx. 66 cm picture measured diagonally)
110° -deflection

Rear/Front Terminals

[REAR]

1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB
- Outputs for TV audio and video signals

2/S 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable)

Audio outputs - phono jacks

[FRONT]

3 , Video input - phono jack
3 , Audio inputs - phono jacks
3 , S video input - 4 pin DIN
Stereo minijack - headphone jack

Sound output
Left/Right — 2x10W (RMS)
2x20W (music power)
Dimensions — 690x535x534 mm approx.
Weight — Approx. 38.1 kg

Supplied accessories
RM-839 Remote Commander (1)
Batteries R6 (2)

Other features — NICAM (KV-28WF1B/28WF1E/28WF1U only)

[RM-839]

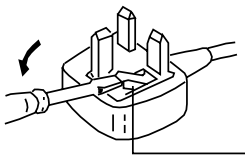
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x45x24 mm (w/h/d)
Weight	Approx. 90g (Not including battery)

Design and specifications are subject to change without notice.

Item \ Model name	KV-28WF1A	KV-28WF1B	KV-28WF1D	KV-28WF1E	KV-28WF1K	KV-28WF1R	KV-28WF1U
PIP	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON	ON	ON	ON
VM Set	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON	ON	ON
FLOT	ON	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	OFF	ON
Norm D/K	OFF	ON	ON	ON	ON	ON	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	OIRT	English

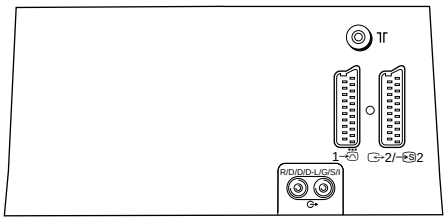
WARNING (KV-28WF1U only)

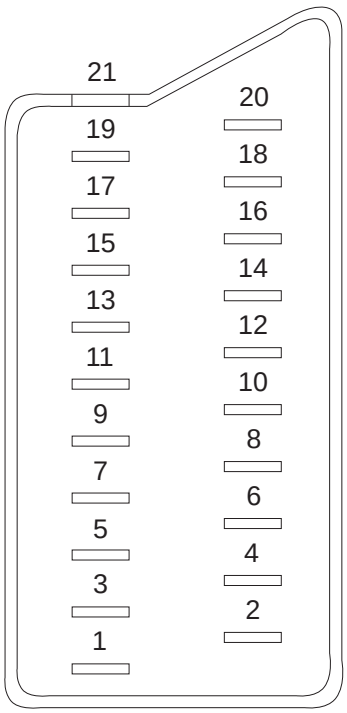
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (1, 2 / S 2)

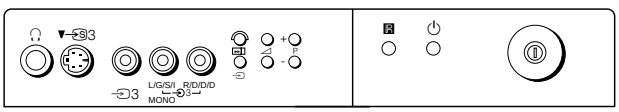




Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.



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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

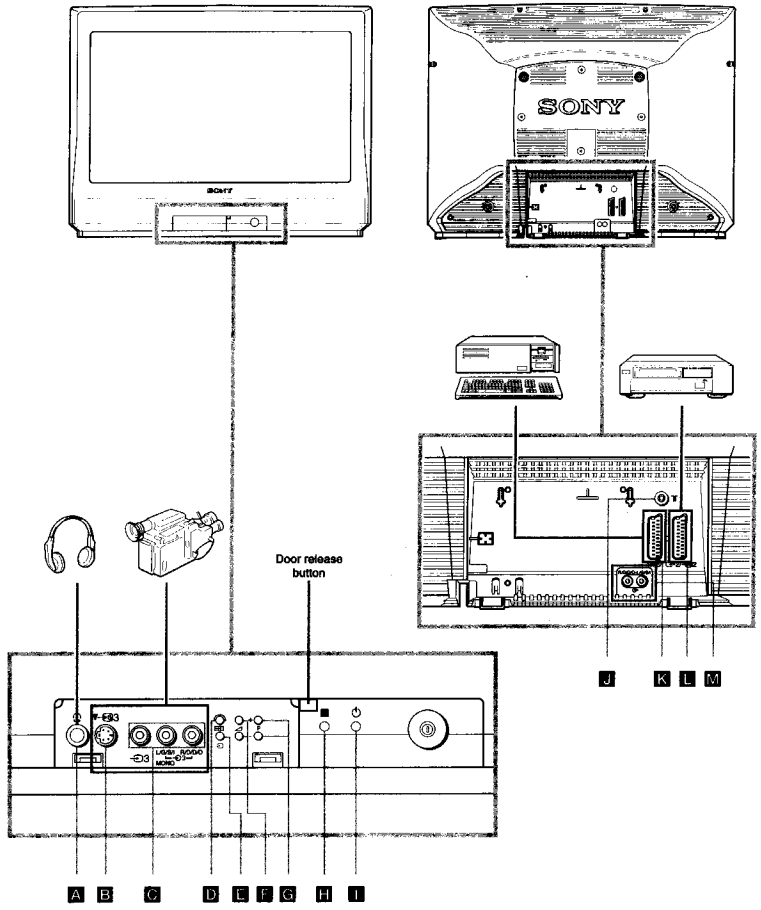
SAFETY-RELATED COMPONENT WARNING!!

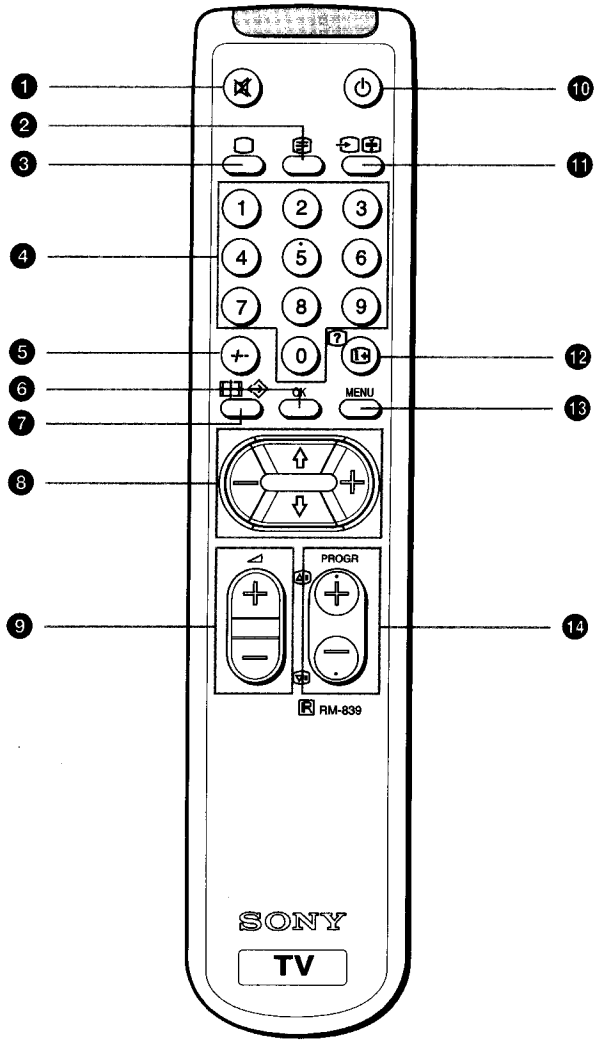
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

The operating instructions mentioned here are partial abstracts from the Operating Manual. The page numbers of the Operating Instruction Manual remain as in the manual.





Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

TV buttons and Terminals

Reference and Symbol	Name	Refer to Page
Front of the set		
A	Headphones jack	29
B	S video input jack	29
C	Audio/video input jacks	29
D	Automatic Preset button	11
E	Input mode button	12
F	Volume control	12
G	P +/-	Programme button	12
H	Standby mode indicator	12
I	Main power switch	12
Rear of the set		
J	Aerial socket	10
K	21 pin Euro connector	29
L	21 pin Euro connector	29
M	Audio phono jacks	29

Remote Commander Operation

Reference and Symbol	Name	Refer to Page
1	Muting on/off button	12
2	Teletext button	13
3	TV power on/TV mode button	12, 13
4	1, 2, ... 9, 0	Number buttons	12
5	- / - -	Double digit entering button	12
6	OK	OK (Confirmation) button	14
7	Screen format button Teletext: Favourite pages button	13 28
8	Menu control	14
9	Volume control button	12
10	Standby button	12
11	Input mode button Teletext: Freezing the subpage	12 27
12	On-screen display button Teletext: reveal button	12 27
13	**MENU**	Menu on/off button	14
14	**PROGR** +/- Teletext: Page up/page down buttons	Programme buttons	12 13

Step 1

Connecting the Aerial

(If you connect a VCR, skip to step 2)

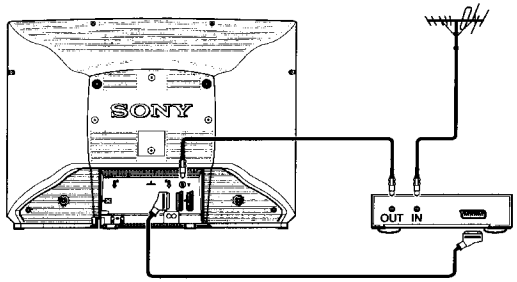
Insert the aerial plug tightly into the aerial socket ⊤ J. Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

Step 2

Connecting a VCR

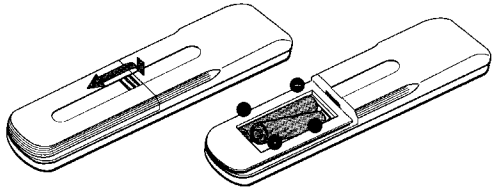
We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 16.

See "Connecting Optional Equipment" on page 29 for more information.



Step 3

Inserting the Batteries Into the Remote Commander



Respect your environment! Dispose of used batteries in an environmentally friendly way.

Step 4

Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers.

If you prefer manual presetting, refer to "Presetting Channels Manually" on page 16.

1 Plug into mains.
Press the power switch ⏻ I on the TV set.

2 Press and hold the button ▭→ D on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

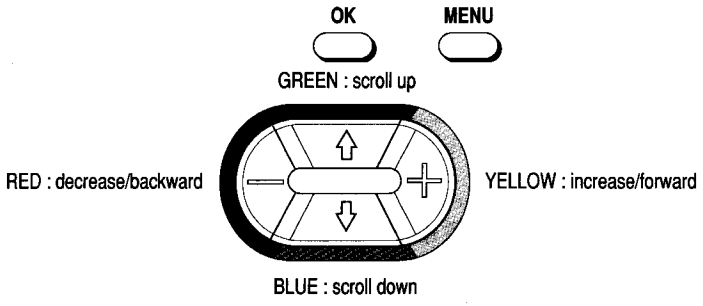
Note: Channels are automatically stored as follows:

Programme 1 BBC1
Programme 2 BBC2
Programme 3 ITV
Programme 4 CH4 or S4C
Programme 5 (If available in your area)

Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons:

1 Press MENU ⓭ to switch menu on/off.
2 Use the menu control buttons ❽ and OK button ❻ (confirm) as follows:



Choosing the Menu Language

This function enables you to change the language of the menu screens.

1 Press power switch ⏻ I on the TV. If the standby indicator ⏻ H on the TV is lit, press ▢ ❸ or a number button ❹ on the Remote Commander.

2 Press the MENU button ⓭ on the remote commander.

3 Press blue or green ❽ to select the language you want then press yellow ❽.

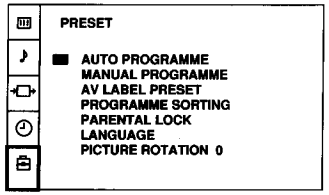
4 Press the MENU button ⓭ to restore the normal TV picture.

Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 11. You can also preset channels automatically by using the remote commander as follows:

1 Press the MENU button ⓭.

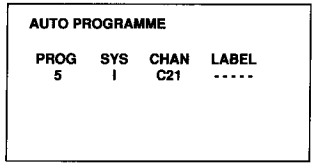
2 Press blue or green ❽ to select the symbol 🖃 on the menu screen then press yellow ❽.



3 Press blue or green ❽ to select 'AUTO PROGRAMME'.

4 Press and hold yellow ❽ until the automatic menu is displayed and the search starts.

After all available channels have been preset, the normal TV picture is shown.



Note: Channels are automatically stored as follows:

Programme 1 BBC1
Programme 2 BBC2
Programme 3 ITV
Programme 4 CH4 or S4C
Programme 5 (If available in your area)

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

TV Operation

To	Press
Switch on	⏻ I on TV
Switch off temporarily	⏻ 10 TV is now in standby mode and ⏻ H indicator on TV lights up.
Switch on from standby mode	3, PROGR +/- 14 G or any number button 4.
Switch off completely	⏻ I on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	PROGR +/- 14 G or number buttons 4 For double digit number, press -/- - 5 then the number e.g. For 23, press -/- - 5 then 2 and 3.
Display on screen indications	i+ 12. Press again to make the indications disappear.
Adjust the volume	+ or - 9 F
Mute the sound	1. Press again to restore the sound.
View video input picture (see page 30 for detailed information)	11 E repeatedly until the desired video input appears. Press 3 to restore the TV picture.

TV Operation (continued)

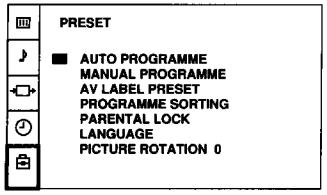
To	Press
Operate Screen Mode (see page 18 for detailed information)	7. 4:3 —> Smart —> Zoom —> Wide When using Zoom mode select 'Scroll' to see the cut-off part of the screen.
View teletext (see page 27 for detailed information)	
Switch on	2
Select a page	three number buttons 4 or 14 (for next page) or 14 (for previous page).
Use fastext	Blue, Green, Red or Yellow 8.
Switch off	3

Presetting Channels Manually

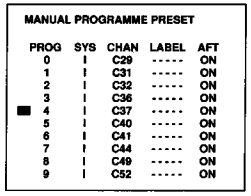
This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

1 Press the MENU button ⓳.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.



3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
0 I C29 ----- ON
1 I C31 ----- ON
2 I C32 ----- ON
3 I C36 ----- ON
4 I C37 ----- ON
5 I C40 ----- ON
6 I C41 ----- ON
7 I C44 ----- ON
8 I C49 ----- ON
9 I C52 ----- ON

4 Press blue or green ❽ to select on which programme number you want to preset a channel then press yellow ❽.

5 Press blue or green ❽ to select the TV broadcast system 'I' or a video input source (AV1,AV2 ...) then press yellow ❽.

6 Press yellow ❽.

7 Select the first number digit of 'CHAN' (channel) then the second number digit of 'CHAN' with the number buttons ❹ on the remote commander
or
Press blue or green ❽ to search for the next available channel.

8 If you want to store the channel, go to step 9. If not, select a new channel using the number buttons ❹ on the remote commander or press blue or green ❽ to resume the search.

9 Press OK ❻.

10 Repeat steps 4 to 9 to preset other channels.

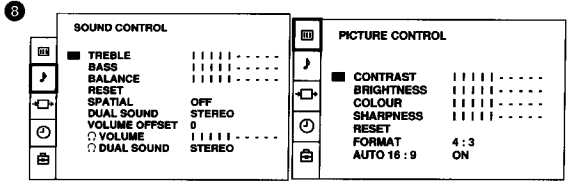
11 Press the MENU button ⓭ to restore the normal TV picture.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select 📺 for picture control or ♪ for sound control then press yellow ❽.



3 Press blue or green ❽ to select the desired item then press yellow ❽.

4 Press red or yellow ❽ to alter the item then press OK ❻.
For the effect of each control, see the following tables.

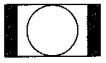
5 Repeat steps 3 and 4 to adjust the other items.

6 Press the MENU button ⓭ to restore the normal TV picture.

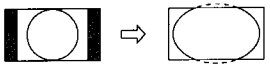
Adjusting the Picture and Sound (continued)

PICTURE CONTROL	Effect
Contrast	• Lower —— I —— Higher
Brightness	• Darker —— I —— Brighter
Colour	• Less —— I —— More
Sharpness	• Softer —— I —— Sharper
Hue	• Greenish —— I —— Reddish (NTSC signals only)
Reset	• Resets picture to the factory preset levels.
Format	• 4:3 —> Smart —> Zoom —> Wide

4:3 for normal ratio 4:3



Smart for imitation of wide screen effect (16:9) for 4:3 broadcasts



Zoom for imitation of wide screen effect (16:9) for movies broadcast in cinemascopic format

When 'Zoom' is selected, you can scroll the screen to see the cut-off part (e.g. subtitles) as follows:

1 Press blue ❽ to select 'Scroll' then press yellow.

2 Press red or yellow ❽ to scroll the picture upwards or downwards (-5 to +5) then press OK ❻.

Wide for 16:9 broadcasts

Auto 16:9 • Automatically selects 16:9 picture mode when receiving a 16:9 broadcast (set to 'Off' if signal reception is weak)

Adjusting the Picture and Sound (continued)

SOUND CONTROL	Effect
Treble	• Less —— I —— More
Bass	• Less —— I —— More
Balance	• Left —— I —— Right
Reset	• Resets sound to the factory preset levels.
Spatial	• Acoustic sound effect.
Dual Sound	• A: Left channel —> B: Right channel —> stereo —> mono
Volume Offset	• Presets the volume level for individual programmes. -12 —— 0 —— +12
∩ Volume	• Adjusts the headphone volume.
∩ Dual Sound	• Selects the headphone channels. A: Left channel —> B: Right channel —> stereo —> mono

Manual Fine-Tuning

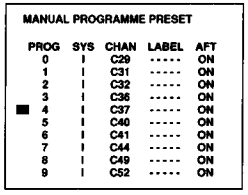
Normally, the automatic fine-tuning (AFT) function is operating.

If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
0 I C29 ----- ON
1 I C31 ----- ON
2 I C32 ----- ON
3 I C36 ----- ON
4 I C37 ----- ON
5 I C40 ----- ON
6 I C41 ----- ON
7 I C44 ----- ON
8 I C49 ----- ON
9 I C52 ----- ON

4 Press blue or green ❽ to select the programme number which corresponds to the channel you want to manually fine-tune.

5 Press yellow ❽ repeatedly until the AFT position changes colour.

6 Press blue or green ❽ to fine-tune the channel frequency (-15 to +15).

7 Press OK ❻.

8 Repeat steps 4 to 7 to fine-tune other channels.

9 Press the MENU button ⓭ to restore the normal TV picture.

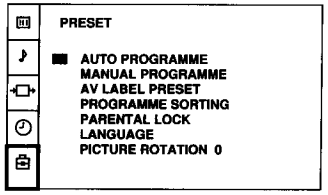
Sorting Programme Positions

This function enables you to exchange the programme positions.

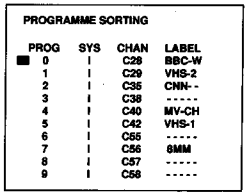
1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'PROGRAMME SORTING' then press yellow ❽.



4 Press blue or green ❽ to select the channel you want to exchange then press yellow ❽.



5 Press blue or green ❽ to select the programme number you wish the channel chosen in step 4 to appear on, then press yellow ❽.

6 Repeat steps 4 to 5 if you wish to exchange other programme positions.

7 Press the MENU button ⓭ to restore the normal TV picture.

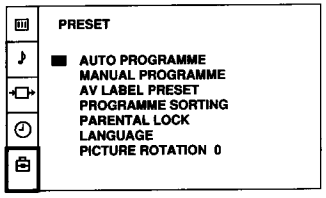
Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

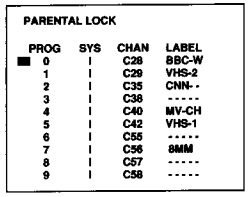
1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'PARENTAL LOCK' then press yellow ❽.



4 Press blue or green ❽ to select the channel you want to block then press yellow ❽. A symbol appears before the programme number to indicate that this channel is now blocked.



5 Repeat step 4 if you wish to block other channels.

6 Press the MENU button ⓭ to restore the normal TV picture.

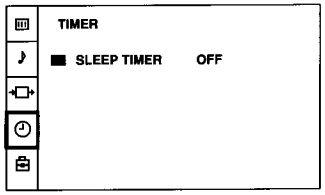
Note: To unblock, press yellow ❽ after selecting the channel to unblock in the 'PARENTAL LOCK' menu.

Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🕘 on the menu screen then press yellow ❽.



3 Press yellow ❽.

4 Press red or yellow ❽ to set time delay and press OK ❻.

OFF 0:30 1:00 1:30 ..... 3:30 4:00

One minute before the TV switches into standby mode, a message is displayed on the screen.

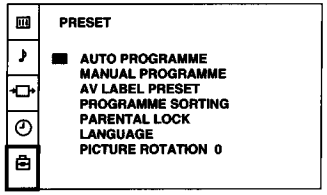
5 Press the MENU button ⓭ to restore the normal TV picture.

Adjusting the Picture Rotation

If, due to the earth magnetism, the picture slants, you can use the function 'Picture Rotation' to readjust the picture.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.



3 Press blue or green ❽ to select 'PICTURE ROTATION' then press yellow ❽.

4 Press red or yellow ❽ to adjust the picture rotation then press OK ❻. The adjusting range is -5 to +5.

5 Press the MENU button ⓭ to restore the normal TV picture.

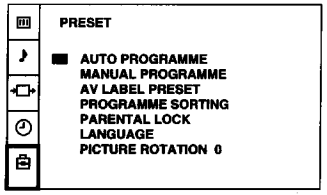
Skipping Programme Positions

This function enables you to skip unused programme positions when selecting them with the PROGR+/- buttons. However, you can still watch the channel of the skipped programme position by using the number buttons.

1 Press the MENU button ⓭.

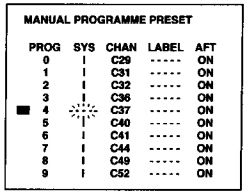
2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.



4 Press blue or green ❽ to select the programme position you want to skip then press yellow ❽.

5 Press blue or green ❽ until '- - -' appears in the 'SYS' position.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
0 I C29 ----- ON
1 I C31 ----- ON
2 I C32 ----- ON
3 I C36 ----- ON
4 C37 ----- ON
5 I C40 ----- ON
6 I C41 ----- ON
7 I C44 ----- ON
8 I C49 ----- ON
9 I C52 ----- ON

6 Press OK ❻.

7 Repeat steps 4 to 6 to skip other programme positions.

8 Press the MENU button ⓭ to restore the normal TV picture.

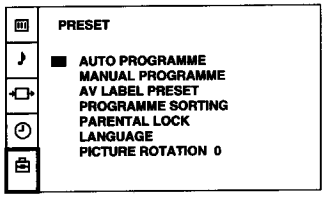
Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

1 Press the MENU button ⓭.

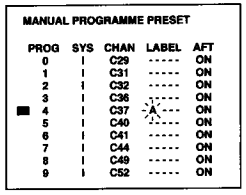
2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.



4 Press blue or green ❽ to select the channel you wish to caption then press yellow ❽ repeatedly until the first element of the 'LABEL' position is highlighted.

5 Press ❽ blue or green to select a letter or number and press yellow ❽ (select '-' for a blank). Select the other four characters in the same way.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
0 I C29 ----- ON
1 I C31 ----- ON
2 I C32 ----- ON
3 I C36 ----- ON
4 I C37 ----- ON
5 I C40 ----- ON
6 I C41 ----- ON
7 I C44 ----- ON
8 I C49 ----- ON
9 I C52 ----- ON

6 After selecting all the characters, press OK ❻.

7 Repeat steps 4 to 6 to caption names for other channels.

8 Press the MENU button ⓭ to restore the normal TV screen.

Teletext

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service.
Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

Switching Teletext On and Off

1 Select the channel which carries the teletext service you wish to view.

2 Press ☰ ❷ to display teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

3 Input three digits for the page number using the number buttons ❹.
The page counter searches for the page and after some seconds the page is displayed.

4 Press ▢ ❸ to return to the normal TV picture.

Using Other Teletext Functions

To	Press
Access the next or preceding teletext page	☰▲⓮ for the next page or ☰▼⓮ for the preceding page
Mix the mode	☰ ❷ when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
Freeze a teletext subpage	⓫. Press once again to cancel.
Reveal hidden information (eg: answers to a quiz)	?⓬. Press once again to cancel.

Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

1 Use the number buttons ❹ to select the page you would like to store.

2 Press ◈ ❼ twice.
The colour prompts at the bottom of the screen flash.

3 Press red, green, blue or yellow ❽ to store the selected page.
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

Displaying the Favourite Pages

1 Press ◈ ❼.

2 Press red, green, blue or yellow ❽ to select the desired page.

Make sure you press ◈ ❼, otherwise the normal Fastext facility operates.

Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke . When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue colours on the Remote Commander.

Press the colour button ❽ that corresponds to the colour-coded menu. The selected page is displayed after some seconds.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
1 K	Normal audio/video and RGB	Audio/video from TV tuner
2/ 2 L	Normal audio/video and S video	Audio/video from selected source
3, 3 B 3 C	Normal audio/video and S video	No output
M	No inputs	Audio from selected source

Connecting Headphones

Plug in the headphones to the ∩ socket A on the front of the TV.

About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Notes on connections:

- If the picture or sound is distorted, move the VCR away from the TV.
- When connecting a monaural VCR, connect only the white jack to both the TV and VCR.
- Select 'TV' for output in the 'VIDEO CONNECTION' menu if you connect a decoder to 2/ 2 L (see page 30).

Selecting Input and Output Signals

This section explains how to select the output signal from 2/2 L and how to select and view the input. You can use direct access buttons 11 E to select the input or the menu system to select input and output.

Selecting Input Signals With Direct Access Buttons

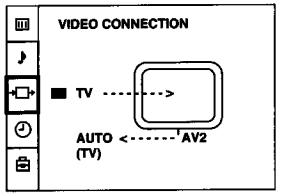
Press 11 E repeatedly.
Press 3 to restore the normal TV picture.

Symbol on the screen	Input Signal
1	Audio/video through Euro AV connector K
	RGB through Euro AV connector K
2	Audio/video through Euro AV connector L
2	S video through Euro AV connector L
3	Audio/video through the phono jacks C
3	S video through the 4 pin DIN B

Selecting With the Video Connection Menu

1 Press the MENU button 13.

2 Press blue or green 8 to select for "VIDEO CONNECTION" then press yellow 8.



3 Press blue or green 8 to select input (for the TV screen) or output (for 2/2 L) then press yellow 8.

4 Press red or yellow 8 repeatedly to select the desired input or output source then press OK 6.

5 Press the MENU button 13 to restore the normal TV picture.

Note: If you select 'AUTO' for output, the output source automatically becomes the same as the desired input source.

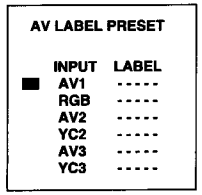
Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

1 Press the MENU button 13.

2 Press blue or green 8 to select the symbol on the screen then press yellow 8.

3 Press blue or green 8 to select 'AV LABEL PRESET' then press yellow 8.



4 Press blue or green 8 to select the desired input source then press yellow 8.

5 Press blue or green 8 to select a letter or number then press yellow 8 (select '-' for a blank).
Select the other four characters in the same way.

6 After selecting all the characters, press OK 6.

7 Repeat steps 4 to 6 to label other input sources.

8 Press the MENU button 13 to restore the normal TV screen.

Troubleshooting

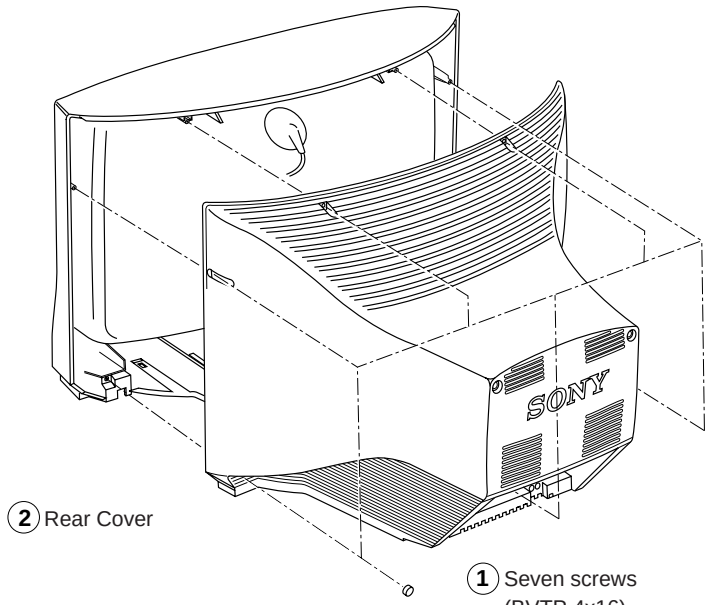
Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ I on the TV. (If ⏻ indicator H is on, press ▭ 3 or a programme number 4 on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds then turn it on again using ⏻ I.
Poor or no picture (screen is dark), but good sound	• Press MENU 13 to enter the 'PICTURE CONTROL' menu and adjust 'Contrast', 'Brightness' and 'Colour'.
Poor picture quality when watching an RGB video source.	• Press ⇥ 11 E repeatedly to select ⇥.
Good picture but no sound	• Press + 9 F. • If 🔇 is displayed on the screen, press 🔇 1.
No colour for colour programmes	• Press MENU 13 to enter the 'PICTURE CONTROL' menu, select 'Reset' then press OK 6.
Remote Commander does not function.	• Replace the batteries.

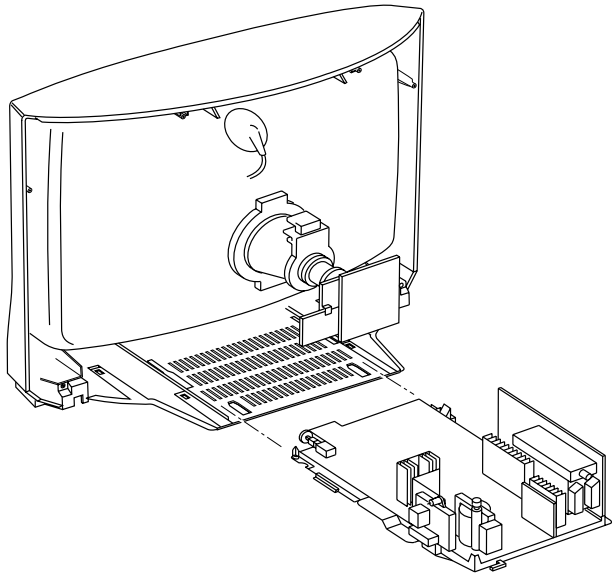
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

SECTION 2
DISASSEMBLY

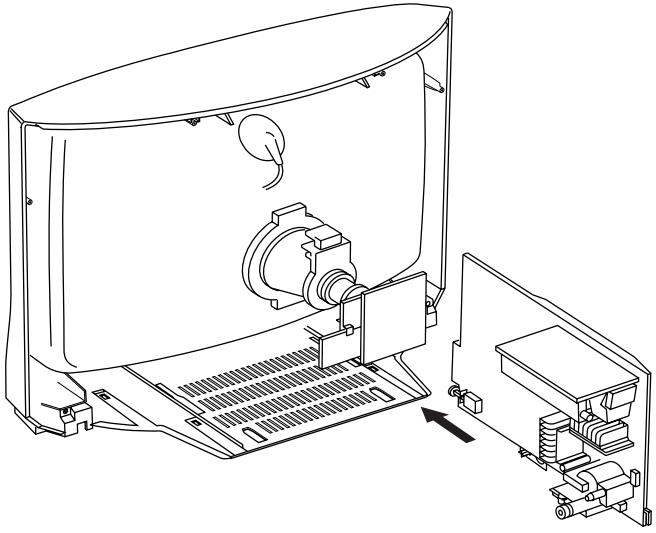
2-1. REAR COVER REMOVAL



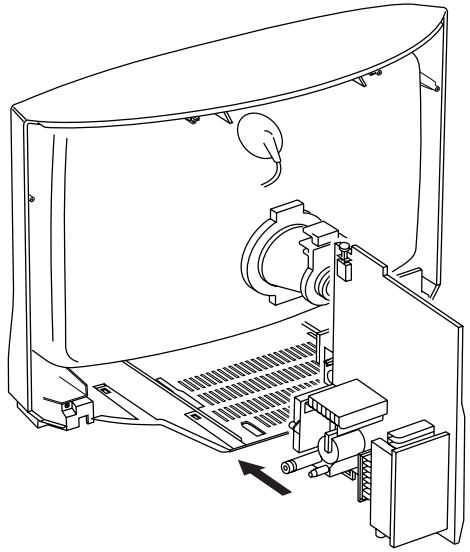
2-2. CHASSIS ASSY REMOVAL



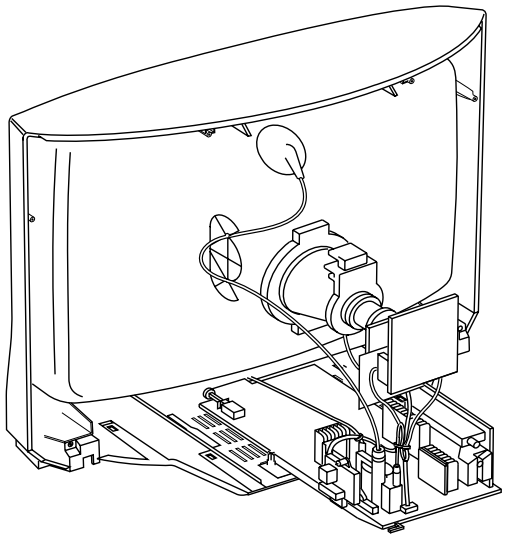
2-3-1. SERVICE POSITION (1)



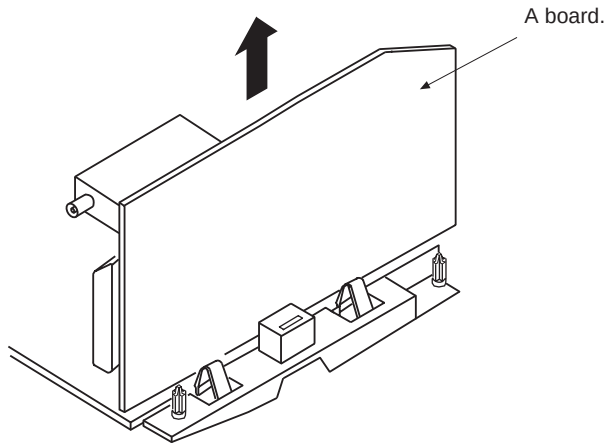
2-3-2. SERVICE POSITION (2)



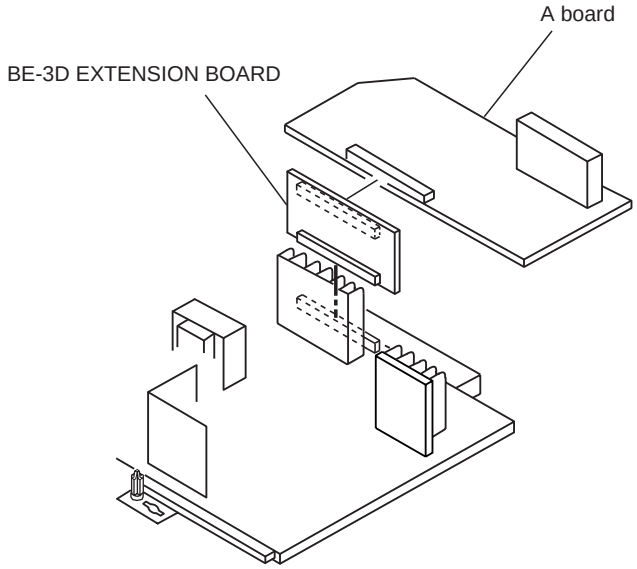
2-4. WIRE DRESSING



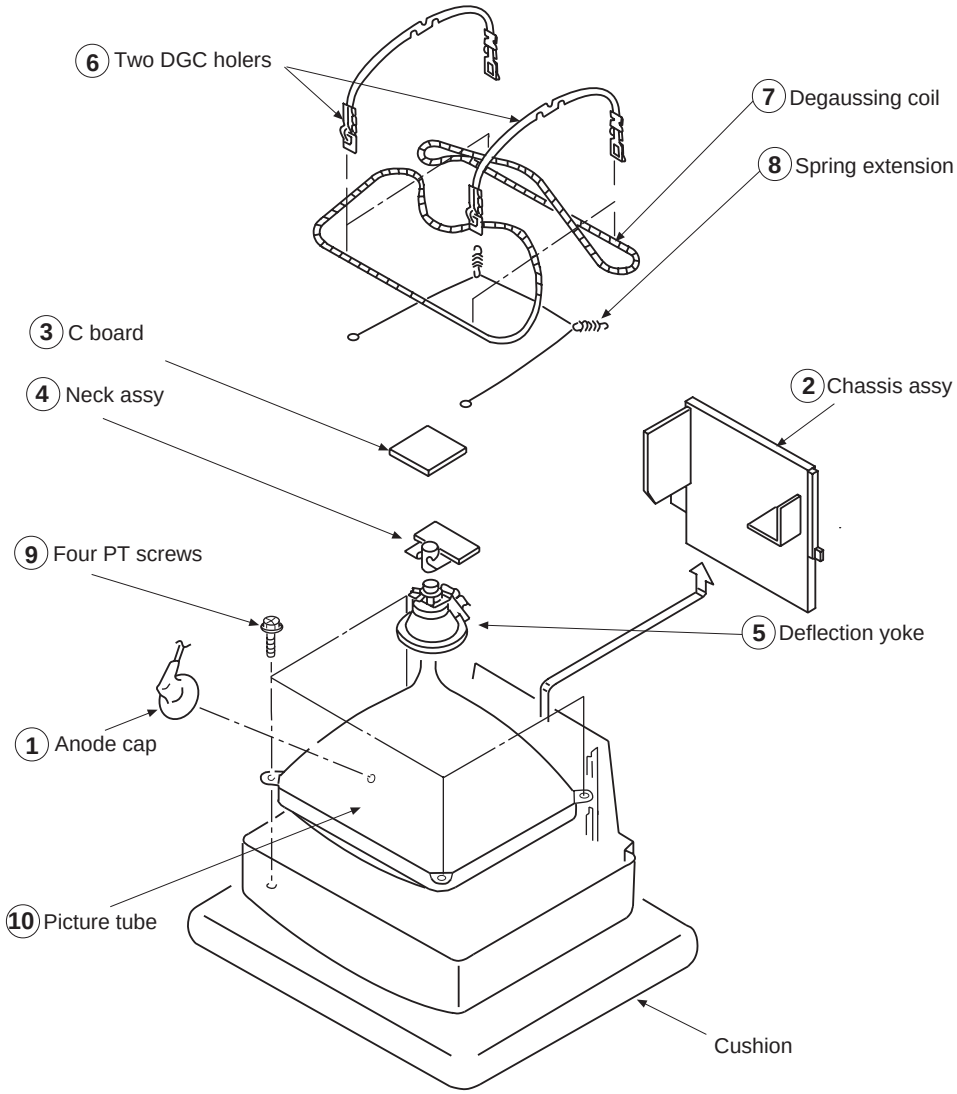
2-5. A BOARD REMOVAL



2-6. A EXTENSION BOARD



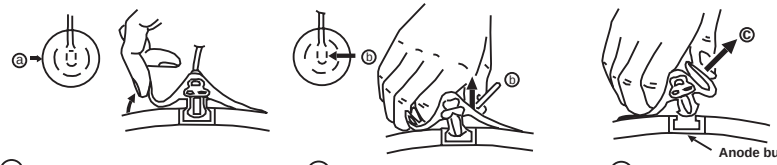
2-7. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

*** REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ

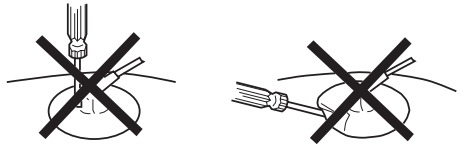
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

• HOW TO HANDLE AN ANODE-CAP

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

For safety reasons, on no account should the plates be removed and not refitted after servicing.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

Note : There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

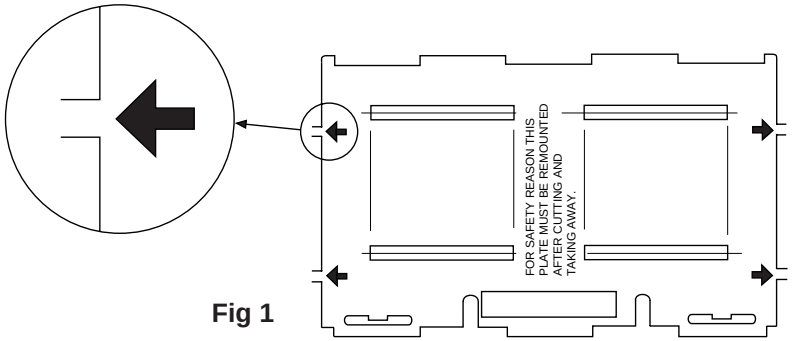


Fig 1

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

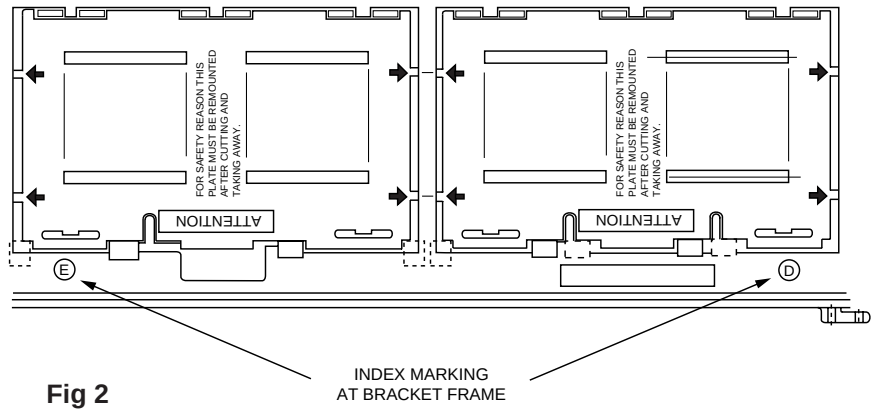

FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.
ATTENTION
E
D
INDEX MARKING AT BRACKET FRAME

Fig 2

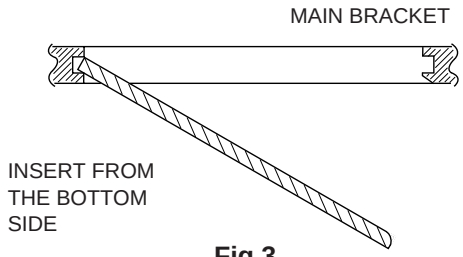


Fig 3

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

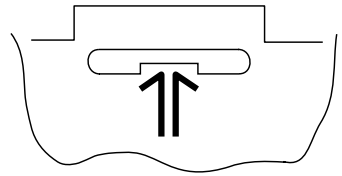


Fig 4

SECTION 3
SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

  ◑ Contrast ..... 80% (or remote control normal)
  ☼ Brightness 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required.
1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparation:
- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   CONTRAST } normal
   BRIGHTNESS }
2. Set the pattern generator raster signal to red.
3. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
4. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
5. Switch the raster signal to blue, then to green and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

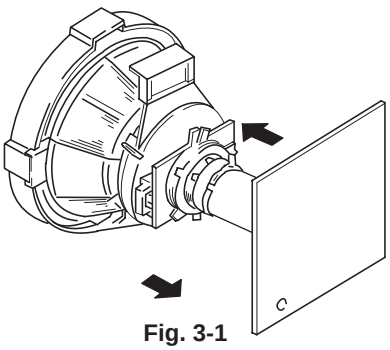


Fig. 3-1

Fig. 3-2

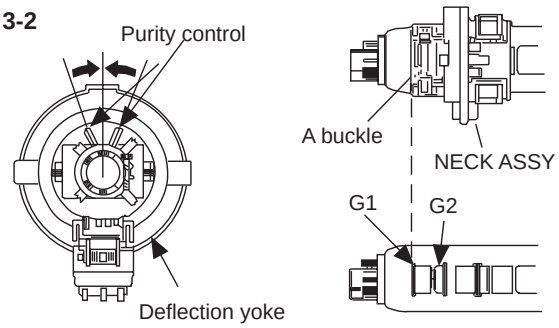
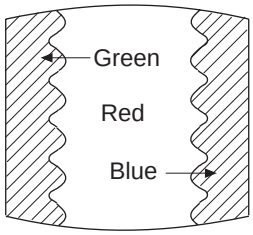


Fig. 3-3



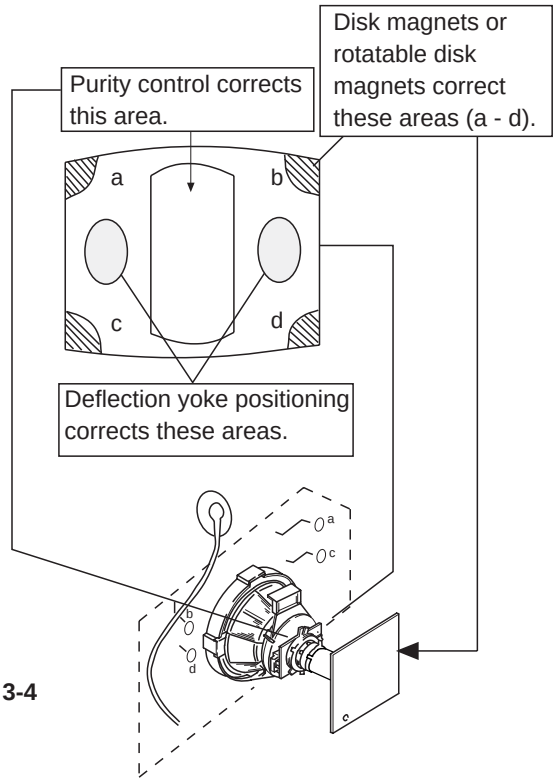


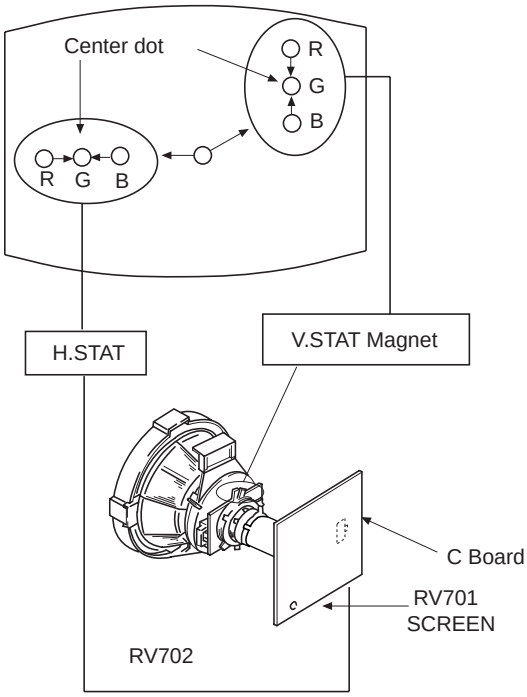
Fig. 3-4

3-2. CONVERGENCE

Preparation:

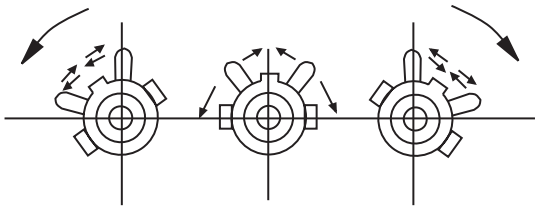
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

(1) Horizontal and vertical static convergence

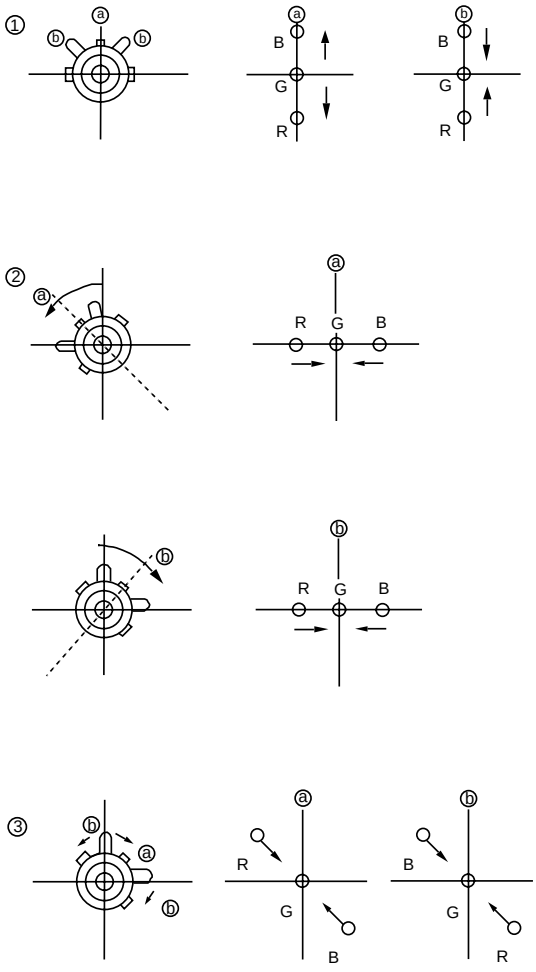


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

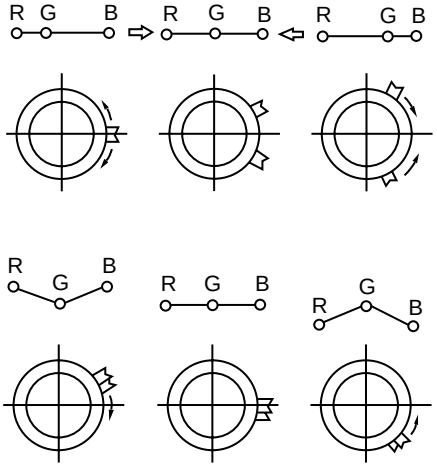
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

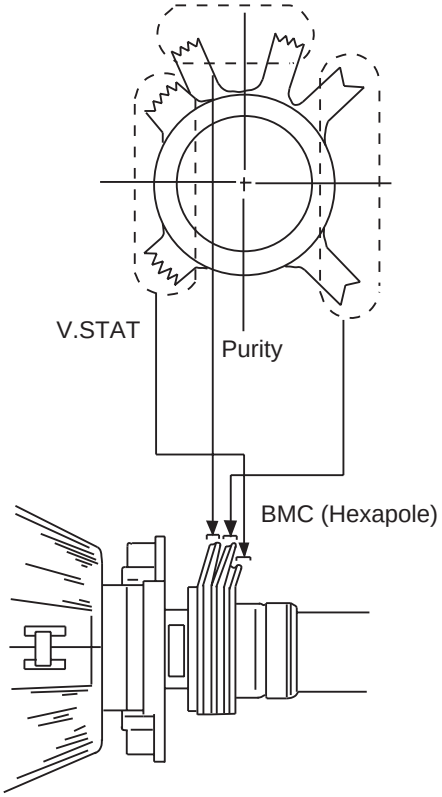


4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet





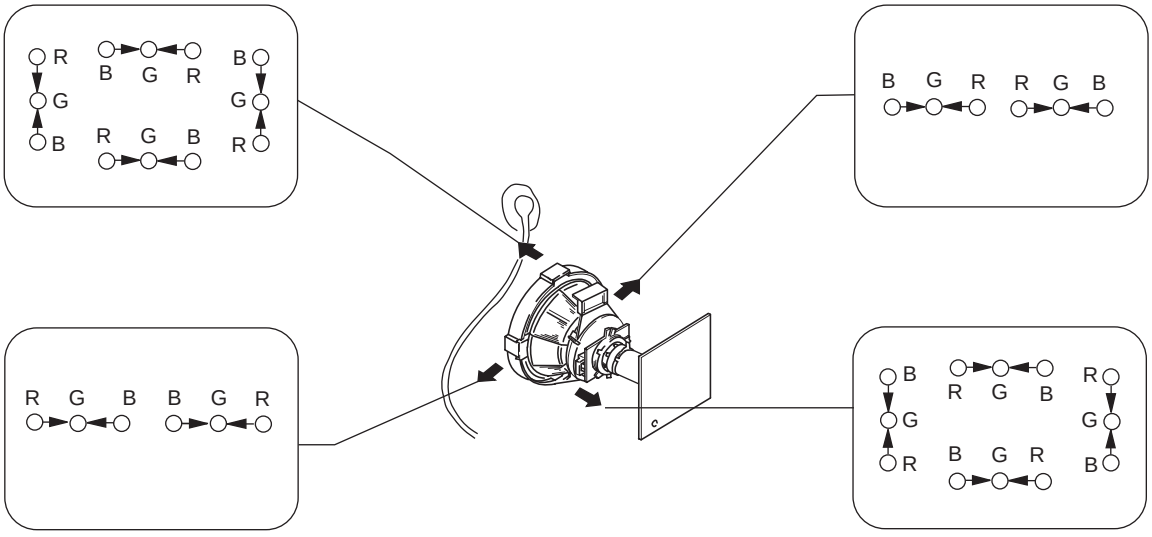
- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

(2) Dynamic convergence adjustment.

Preparation:

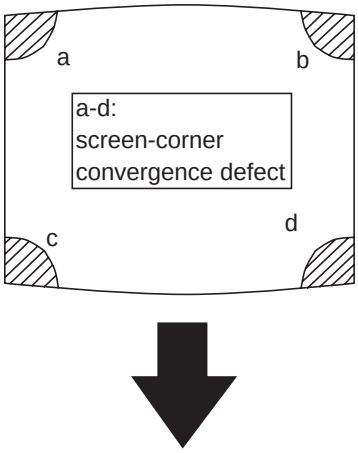
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

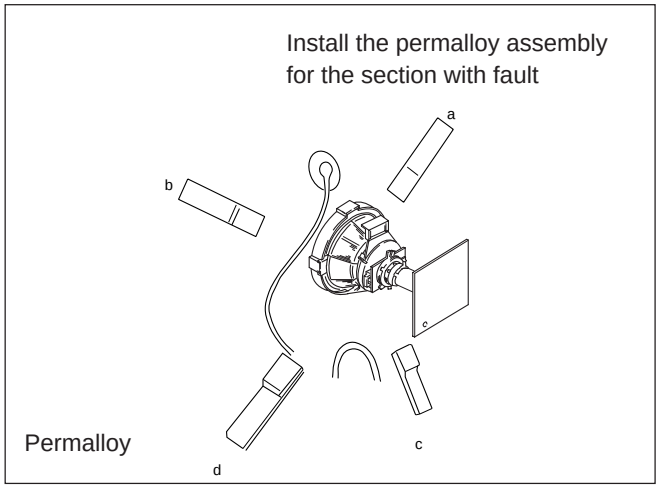
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Re-install the deflection yoke spacer.



(3) Screen corner convergence.

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.





3-3. WHITE BALANCE

G2 Setting

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of 3.0V ±0.3V.

White balance adjustment

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

PICTURE ADJUSTMENT

AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

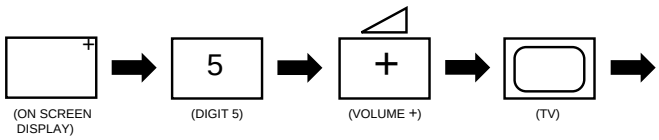
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-862.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT-- " will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

TEST MENU

> Picture adjustment
Geometry
Wide
MSP
IC status
Current TV status

4. Move to the corresponding adjustment using the button on the commander.
5. Move the button to the right to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments are completed.

PICTURE ADJUSTMENT

AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj

WIDE

V Aspect	47
V Scroll	31
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

MSP	
AGC ON/OFF	ON
Constant gain CDB	0
FM prescale FMP	36
Zwei mono-st WHI	36
Zwei st-mono WLO	18
Zwei mono-bi WMH	36
Zwei bi-mono WLO	18
Time zwei WML	41
Fawct limit	10
Fawct soll init FAW	12
Fawer tol	2
Nicam Err Max CCT	10
Nicam Err Min	0
Nicam Prescale NIP	97
Time Nicam	31
Carrier mute CRM	OFF
Audio clock ACO	HIZ
Scart prescale	25
Scart volume	64

IC STATUS (CXA2000 / CXA2040)	
CXA2000	
H lock	1
IKR	1
VNG	0
X-RAY	0
Colour system	3
CV1 Sync	1
CXA2040	
Sync sep	1
S1 mode pin	01
S2 mode pin	01
TUNER	
Tuner status	01101011

TV STATUS	
Text system	C TEXT/TV TEXT
Dolby	NO/YES
Text language set	WEST/EAST/RUSSIAN
Menu language set	WEST/EAST/RUSSIAN
Destination	B/D/U/K/L/E/A/R
Scart 16:9	OFF/ON
RGB priority	OFF/ON
Ageing	OFF/ON
Size	29/25
Colour trap sw	SECAM/ALL
Velocity mod	ON/OFF
AFT STATUS	WINDOW/HIGH/LOW

SUB BRIGHTNESS ADJUSTMENT

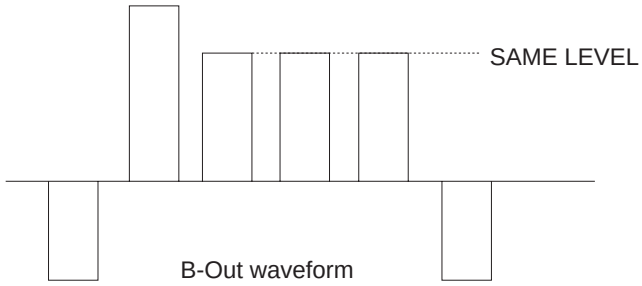
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

SUB COLOUR ADJUSTMENT

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

SYSTEM B/G, D/K, I & L I.F ADJUSTMENT

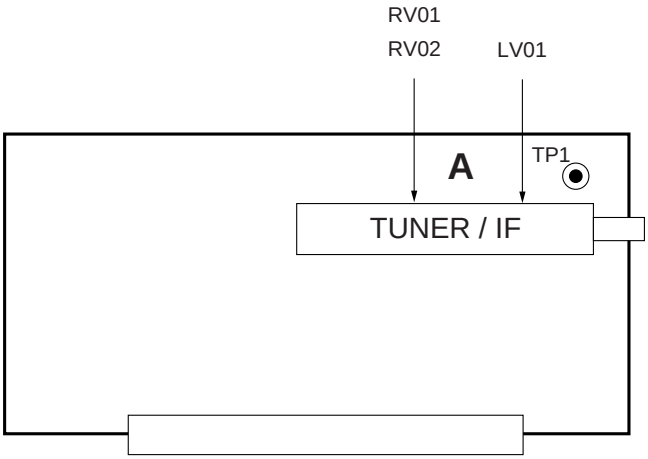
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

SYSTEM L BAND 1 I.F ADJUSTMENT

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

TUNER AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of 3.0V ± 0.3V.



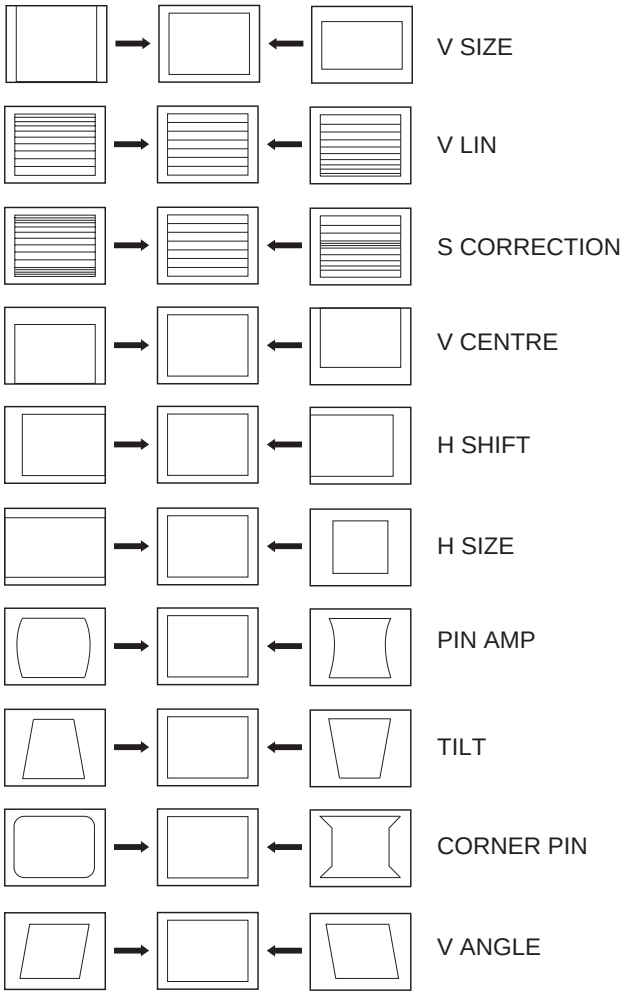
- A Board component side -

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj



4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

Note:
TT modes 40-49 require the TV to be in programme 59 before the command is accepted.

00	Cancel Test mode
01	Picture maximum
02	Picture minimum
03	Volume 30%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Ageing mode
08	Set shipping conditions
09	Reset language select menu on power up
10	No function
11	Clear & Disable OSD
12	Enable OSD
13	Scart 16:9 Enable/Disable
14	Display TV status
15	Picture reset
16	Set 32" chassis (Wide models only)
17	Set all AV labels to default
18	RGB Priority Enable/Disable
19	Set all programme labels to default
20	No function
21	Sub Picture Adjustment (use red/yellow)
22	Sub Colour Adjustment (use red/yellow)
23	Sub Brightness Adjustment (use red/yellow)
24	Destination U
25	Destination D
26	Destination B
27	Destination K
28	Destination L
29	Destination E
30	No function
31	Destination A
32	Destination R

33	Sub Woofer Enable
34	Sub Woofer Disable
35	Set up trap switch
36	Rotation test
37	Set 25" (24" Wide models)
38	Set 29" (28" Wide models)
39	D/K Nicam Enable
40	No function
41	Re-initialise the NVM
42	Default Programme info in NVM with Pencoed factory channel setup
43	Default Geometry settings
44	Default favourite pages to 100,101,102 & 103
45	Switch off all Channel Locks
46	Dealer commander mode (pending)
47	Default MSP settings
48	Restore NVM test byte Undo TT49
49	Delete NVM test byte Sets virgin NVM
50	No function
51	Text interlace odd (NON INTERLACE MODE = 3)
52	Text interlace even (NON INTERLACE MODE = 2)
53	Auto picture ON
54	Auto picture OFF
55	Auto cut off ENABLE
56	Auto cut off DISABLE
57	AV3 ENABLE
58	AV3 DISABLE (if TV Text) otherwise AV3 ENABLE
59	Auto IF Display
60	No function
61	Dolby Pro-logic ON
62	Noise Left
63	Noise Right
64	Noise Centre
65	Noise Surround

66	DSP Bypass
67	D/K Nicam Disable
68	Diagnostics OFF
69	Diagnostics ON
70	No function
71	Lumisponder Curve 1
72	Lumisponder Curve 2
73	Jungle Select (CXA2000 or CXA2076)
74	Text H Position adjust
75	Picture reset
76	MSP BG filter enabled (h/w required)
77	Sound reset
78	MSP BG filter disabled (h/w required)
79	Wide set-up (Wide screen models only)
80	No function
81	Velocity Mod ON
82	Velocity Mod OFF
83	Picture Rise step 40ms
84	Picture Rise step 80ms
85	Picture Rise step 160ms
86	Picture Rise OFF
87	Select Shop mode
88	Compact Text Acquisition Disable
89	Compact Text Acquisition Enable
90	No function
91	Sound Centre mode NORMAL
92	Sound Centre mode WIDE
93	Sound Centre mode PHANTOM
94	Toggle Compact Text Acquisition Delay Bit 0
95	Toggle Compact Text Acquisition Delay Bit 1
96	Toggle Compact Text Acquisition Delay Bit 2
97	Toggle Compact Text Acquisition Delay Bit 3
98	Toggle Compact Text Acquisition Delay Bit 4
99	Set test menu

These test modes can set the delay byte to any value 0-31 which creates a (value x 20) mS delay.

4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

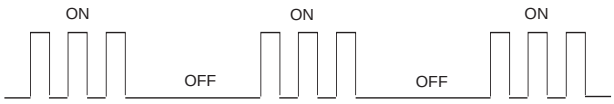
The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

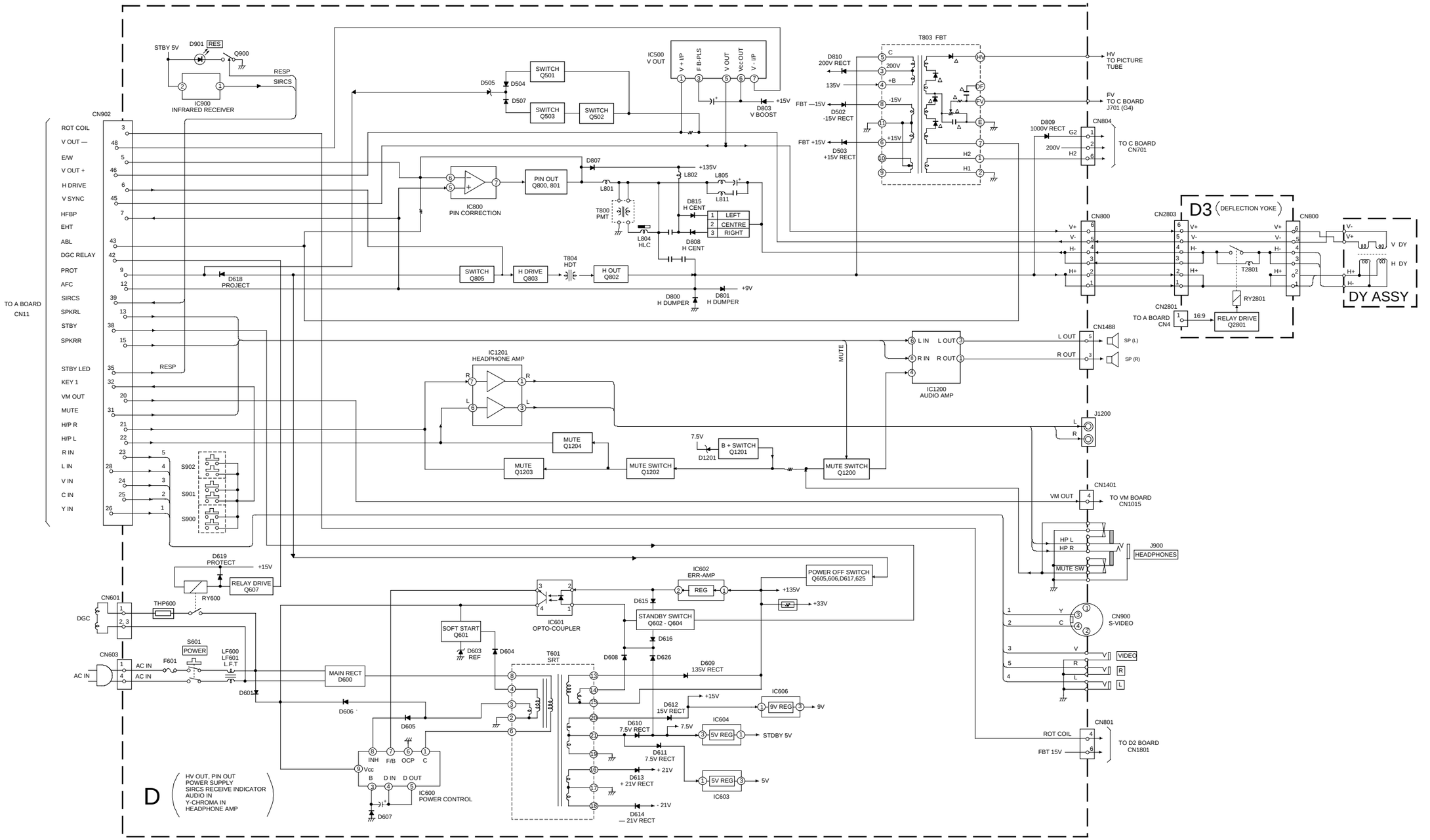
Table 1

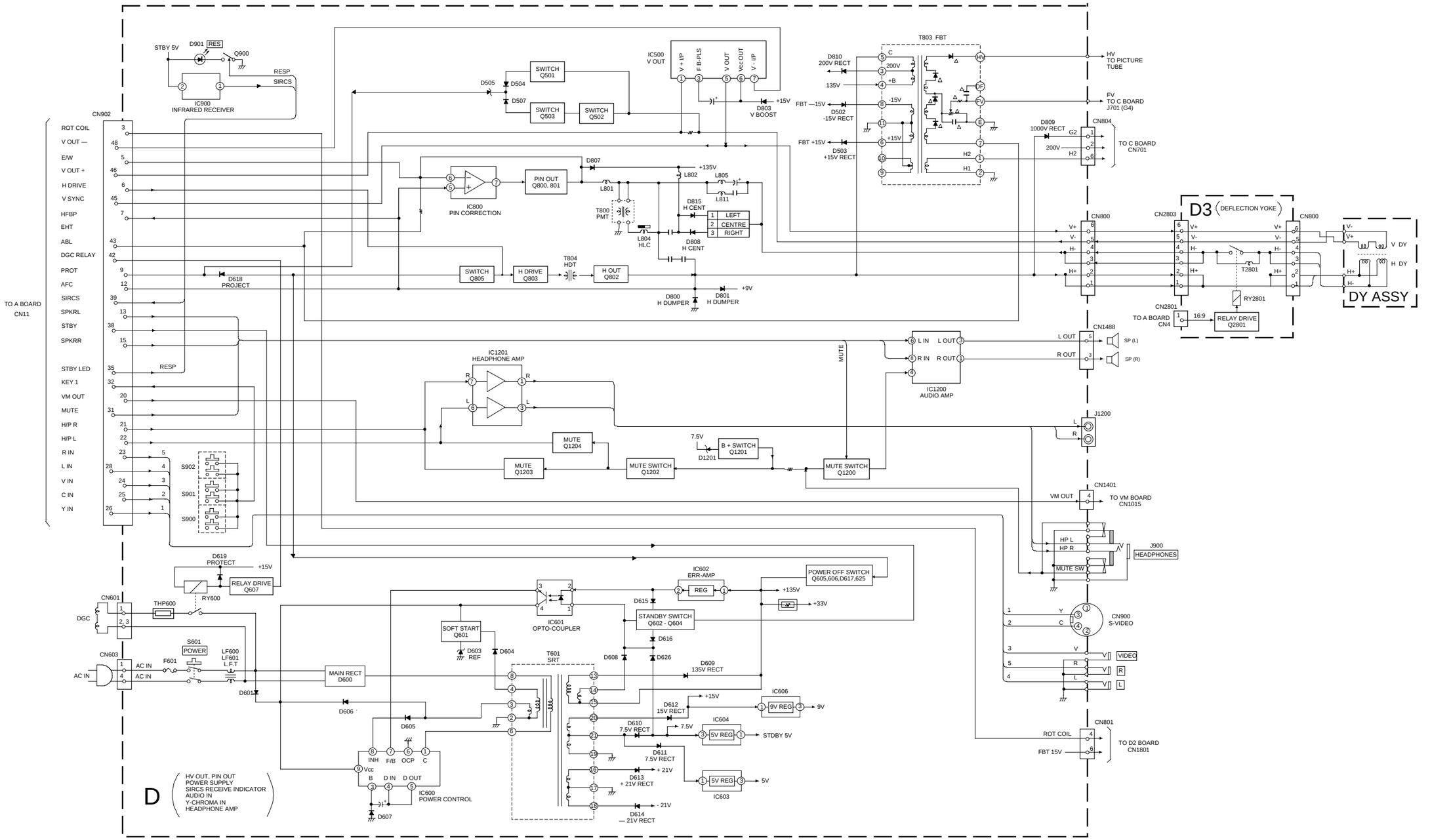
ERROR	LED ERROR COUNT
No error	00
Not allowed (may be confused with Sircs response flash!)	01
Protection circuit trip < ANY TIME >	02
IIC SCL LOW < POWER UP ONLY >	03
IIC SDA LOW < POWER UP ONLY >	04
IIC SDA & SCL LOW < POWER UP ONLY >	05
Jungle/Chroma controller no acknowledge < POWER UP ONLY >	06
Video Switch no acknowledge < POWER UP ONLY >	07
Tuner no acknowledge	08
MSP no acknowledge	09
NVM no acknowledge	10
M3L TXD Low < POWER UP ONLY >	11
M3L RXD Low < POWER UP ONLY >	12
M3L ENABLE Low < POWER UP ONLY >	13
M3L TXD & RXD Low < POWER UP ONLY >	14
Compact Text test fail < POWER UP ONLY >	15
A V switch cannot power on reset < Chassis Initialisation >	16
Cannot initialise jungle (after initial power on checked out OK) - < Chassis Initialisation >	17
NVM acknowledge fail after initialisation (STBY +5V-same as micro!)	18
Multiple devices with no acknowledge < POWER UP ONLY >	19
Compact text run-time failure < MAY NOT BE FATAL-DISPLAY ON ERROR READER >	20
A V SWITCH response failure after power up check (+9V test)	21
JUNGLE/CHROMA controller response failure after power up check (-9V test)	22
Compact text does not respond (-5V test)	23
MSP run-time failure < MAY NOT BE FATAL-DISPLAY ON ERROR READER >	24
M3L bus Clock low time out after data send (run-time failure)	25
M3L bus Clock low time out after data send (at power up check)	26
M3L bus Clock low time out after data send (at initialisation)	27
DSP run-time failure < MAY NOT BE FATAL-DISPLAY ON ERROR READER >	28

Flash Timing Example : e.g. error number 3.

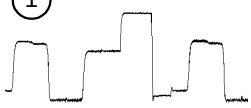
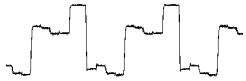
Stby LED



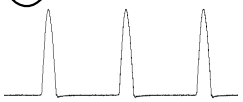
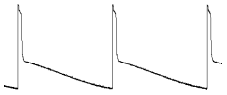
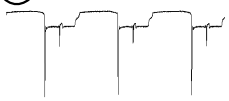
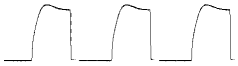
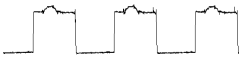
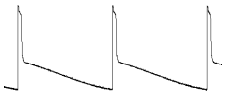
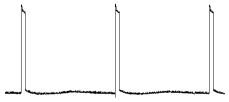
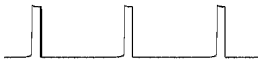
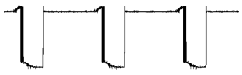
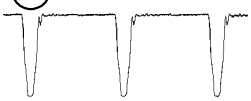
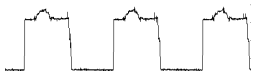
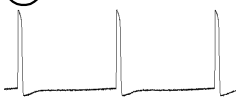

D
HV OUT, PIN OUT
POWER SUPPLY
SIRCS RECEIVE INDICATOR
AUDIO IN
Y-CHROMA IN
HEADPHONE AMP
TO A BOARD CN11
CN902
ROT COIL
V OUT —
E/W
V OUT +
H DRIVE
V SYNC
HFBP
EHT
ABL
DGC RELAY
PROT
AFC
SIRCS
SPKRL
STBY
SPKRR
STBY LED
KEY 1
VM OUT
MUTE
H/P R
H/P L
R IN
L IN
V IN
C IN
Y IN
RESP
S902
S901
S900
STBY 5V
D901
RES
Q900
IC900
INFRARED RECEIVER
IC500
V OUT
V + I/P
F B-PLS
V OUT
Vcc OUT
V - I/P
D803
V BOOST
+15V
SWITCH Q501
SWITCH Q503
SWITCH Q502
D505
D504
D507
T803 FBT
D810
200V RECT
135V
FBT —15V
D502
-15V RECT
FBT +15V
D503
+15V RECT
200V
+B
-15V
+15V
H2
H1
HV
TO PICTURE TUBE
FV
TO C BOARD J701 (G4)
D809
1000V RECT
G2
CN804
TO C BOARD CN701
IC800
PIN CORRECTION
PIN OUT Q800, 801
D807
L801
T800
PMT
L804
HLC
L802
L805
L811
+135V
D815
H CENT
D808
H CENT
1 LEFT
2 CENTRE
3 RIGHT
SWITCH Q805
H DRIVE Q803
T804
HDT
H OUT Q802
D800
H DUMPER
D801
H DUMPER
+9V
D618
PROJECT
CN800
CN2803
D3
DEFLECTION YOKE
T2801
RY2801
CN2801
TO A BOARD CN4
16:9
RELAY DRIVE Q2801
V DY
H DY
DY ASSY
IC1201
HEADPHONE AMP
MUTE
MUTE Q1204
MUTE Q1203
MUTE SWITCH Q1202
MUTE SWITCH Q1200
7.5V
D1201
B + SWITCH Q1201
IC1200
AUDIO AMP
L IN
R IN
L OUT
R OUT
CN1488
SP (L)
SP (R)
J1200
CN1401
VM OUT
TO VM BOARD CN1015
HP L
HP R
MUTE SW
J900
HEADPHONES
CN900
S-VIDEO
VIDEO
CN801
ROT COIL
FBT 15V
TO D2 BOARD CN1801
D619
PROTECT
+15V
RELAY DRIVE Q607
RY600
CN601
DGC
THP600
CN603
AC IN
S601
POWER
F601
LF600
LF601
L.F.T
D601
MAIN RECT D600
D606
D605
IC601
OPTO-COUPLER
IC602
ERR-AMP
REG
POWER OFF SWITCH Q605,606,D617,625
+135V
+33V
D615
STANDBY SWITCH Q602 - Q604
D616
D608
D626
SOFT START Q601
D603
REF
D604
T601
SRT
D609
135V RECT
D612
15V RECT
IC606
9V REG
9V
D610
7.5V RECT
7.5V
IC604
5V REG
STDBY 5V
D611
7.5V RECT
D613
+ 21V RECT
+ 21V
IC603
5V
D614
— 21V RECT
- 21V
INH
F/B
OCP
C
Vcc
B
D IN
D OUT
IC600
POWER CONTROL
D607


D
HV OUT, PIN OUT
POWER SUPPLY
SIRCS RECEIVE INDICATOR
AUDIO IN
Y-CHROMA IN
HEADPHONE AMP
TO A BOARD CN11
CN902
ROT COIL
V OUT —
E/W
V OUT +
H DRIVE
V SYNC
HFBP
EHT
ABL
DGC RELAY
PROT
AFC
SIRCS
SPKRL
STBY
SPKRR
STBY LED
KEY 1
VM OUT
MUTE
H/P R
H/P L
R IN
L IN
V IN
C IN
Y IN
RESP
S902
S901
S900
STBY 5V
D901
RES
Q900
IC900
INFRARED RECEIVER
IC500
V OUT
V + I/P
F B-PLS
V OUT
Vcc OUT
V - I/P
D803
V BOOST
+15V
SWITCH Q501
SWITCH Q503
SWITCH Q502
D505
D504
D507
T803 FBT
D810
200V RECT
135V
FBT —15V
D502
-15V RECT
FBT +15V
D503
+15V RECT
200V
+B
-15V
+15V
H2
H1
HV
TO PICTURE TUBE
FV
TO C BOARD J701 (G4)
D809
1000V RECT
G2
CN804
TO C BOARD CN701
IC800
PIN CORRECTION
PIN OUT Q800, 801
D807
L801
T800
PMT
L804
HLC
L802
L805
L811
+135V
D815
H CENT
D808
H CENT
1 LEFT
2 CENTRE
3 RIGHT
SWITCH Q805
H DRIVE Q803
T804
HDT
H OUT Q802
D800
H DUMPER
D801
H DUMPER
+9V
D618
PROJECT
CN800
CN2803
D3
DEFLECTION YOKE
T2801
RY2801
CN2801
TO A BOARD CN4
16:9
RELAY DRIVE Q2801
V DY
H DY
DY ASSY
IC1201
HEADPHONE AMP
MUTE
MUTE Q1204
MUTE Q1203
MUTE SWITCH Q1202
MUTE SWITCH Q1200
7.5V
D1201
B + SWITCH Q1201
IC1200
AUDIO AMP
L IN
R IN
L OUT
R OUT
CN1488
SP (L)
SP (R)
J1200
CN1401
VM OUT
TO VM BOARD CN1015
HP L
HP R
MUTE SW
J900
HEADPHONES
CN900
S-VIDEO
VIDEO
CN801
ROT COIL
FBT 15V
TO D2 BOARD CN1801
D619
PROTECT
+15V
RELAY DRIVE Q607
RY600
CN601
DGC
THP600
CN603
AC IN
S601
POWER
F601
LF600
LF601
L.F.T
D601
MAIN RECT D600
D606
D605
IC601
OPTO-COUPLER
IC602
ERR-AMP
REG
POWER OFF SWITCH Q605,606,D617,625
+135V
+33V
D615
STANDBY SWITCH Q602 - Q604
D616
D608
D626
SOFT START Q601
D603
REF
D604
T601
SRT
D609
135V RECT
D612
15V RECT
IC606
9V REG
9V
D610
7.5V RECT
7.5V
IC604
5V REG
STDBY 5V
D611
7.5V RECT
D613
+ 21V RECT
+ 21V
IC603
5V
D614
— 21V RECT
- 21V
INH
F/B
OCP
C
Vcc
B
D IN
D OUT
IC600
POWER CONTROL
D607

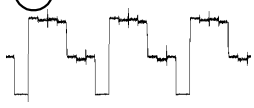
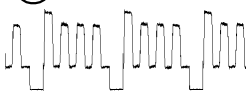
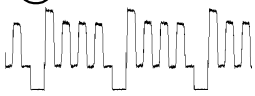
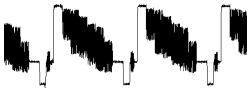
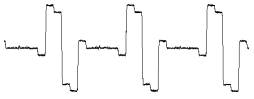
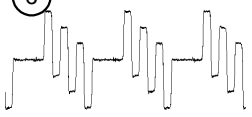
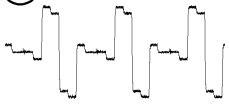
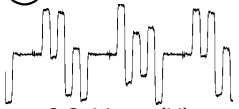
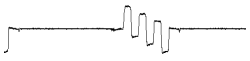
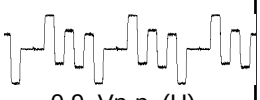
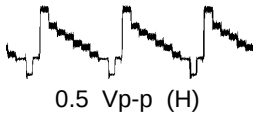
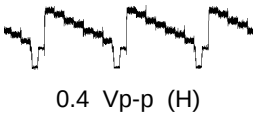
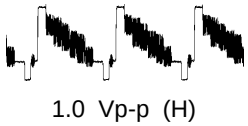
WAVEFORMS C BOARD

①  110 Vp-p (H)	②  108 Vp-p (H)	③ 90 Vp-p (2H)	④ 21 Vp-p (2H)

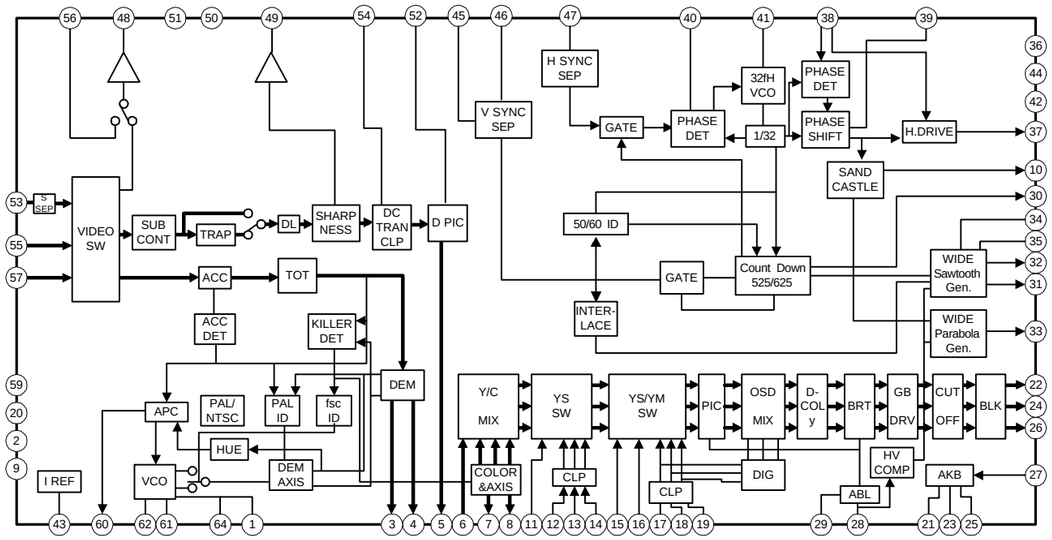
WAVEFORMS D BOARD

①  1.2K Vp-p (H)	②  56.0 Vp-p (V)	③  13.0 Vp-p (H)	④  178 Vp-p (H)
⑤  2.6 Vp-p (H)	⑥  56 Vp-p (V)	⑦  31 Vp-p (V)	⑧  140 Vp-p (H)
⑨  3.9 Vp-p (H)	⑩ 1.0 Vp-p (H)	⑪  28 Vp-p (H)	⑫  3.0 Vp-p (H)
⑬  5.5 Vp-p (V)			

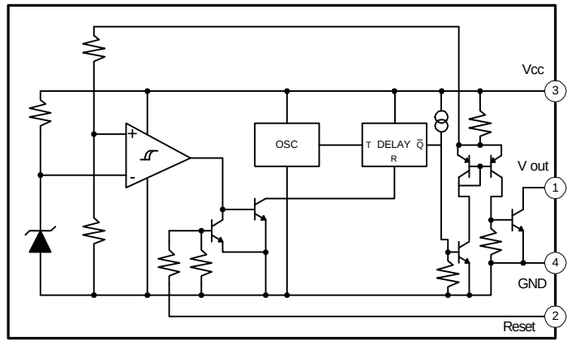
WAVEFORMS A BOARD

① 3.5 Vp-p (H)	②  3.0 Vp-p (H)	③ PAL.SECAM  3.0 Vp-p (H)	③ NTSC  2.3 Vp-p (H)	④  5.1 Vp-p (H)
⑤  1.0 Vp-p (H)	⑥  1.4 Vp-p (H)	⑦ PAL.NTSC  0.6 Vp-p (H)	⑦ SECAM 0.5 Vp-p (H)	⑧ PAL  0.8 Vp-p (H)
⑧ SECAM  1.5 Vp-p (H)	⑧ NTSC  0.9 Vp-p (H)	⑨ PAL.SECAM  0.5 Vp-p (H)	⑨ NTSC  0.4 Vp-p (H)	⑩  1.0 Vp-p (H)

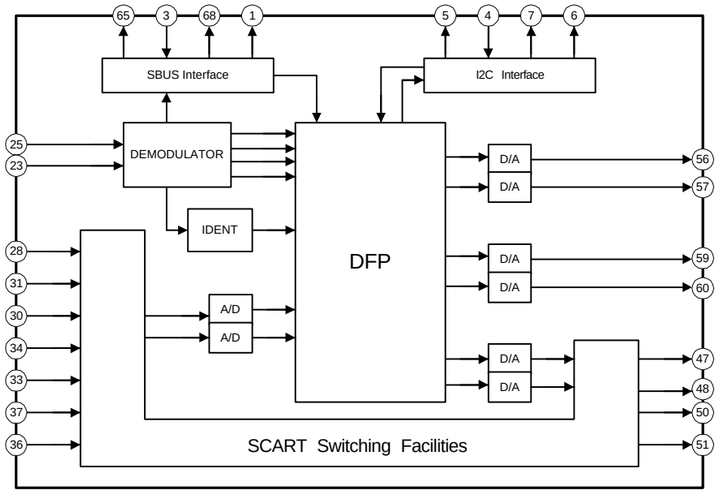
A BOARD IC301 CXA2000Q-TL



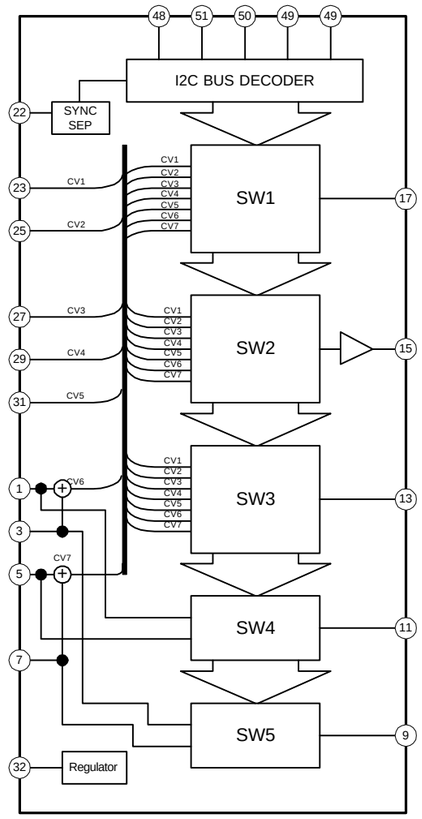
A BOARD IC4 PST593C



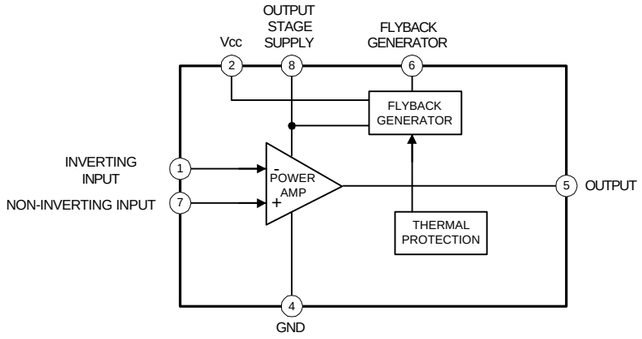
A BOARD IC202 MSP3410/MSP3400



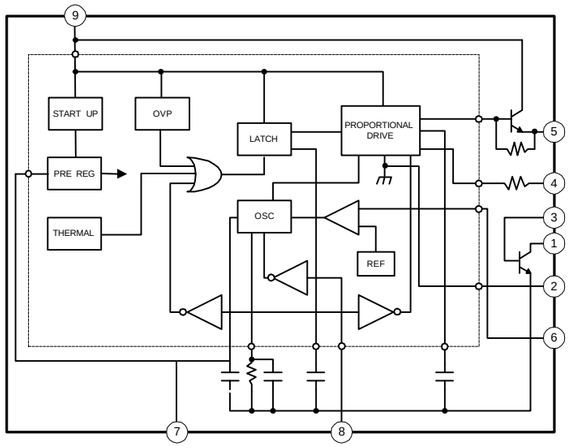
A BOARD IC201 CXA2040Q



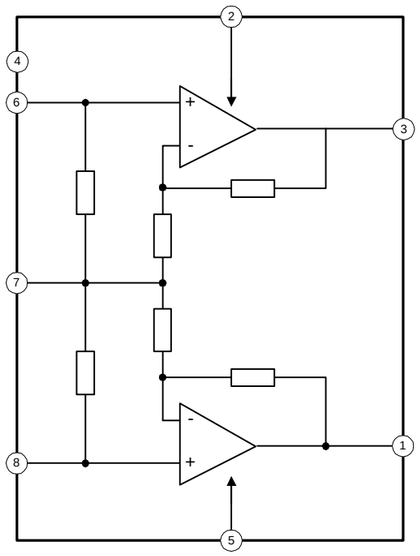
D BOARD IC500 STV9379



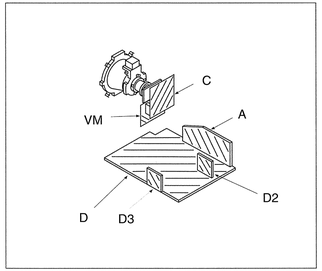
D BOARD IC600 STR-S6708



D BOARD IC1200 TDA7264



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms. k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- ⌗ : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

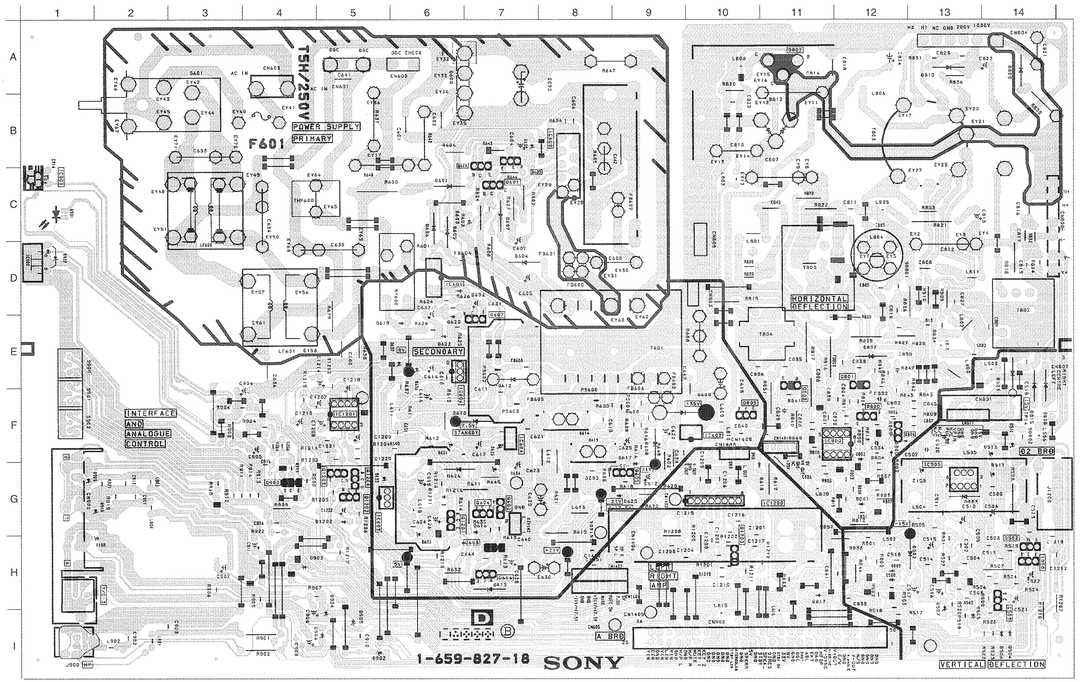
Note : Les composants identifiés par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ⨯	ADJUSTABLE RESISTOR
COIL	: LF-BL	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

D Board **D** [HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICATION]



Note:
The Circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing

D BOARD

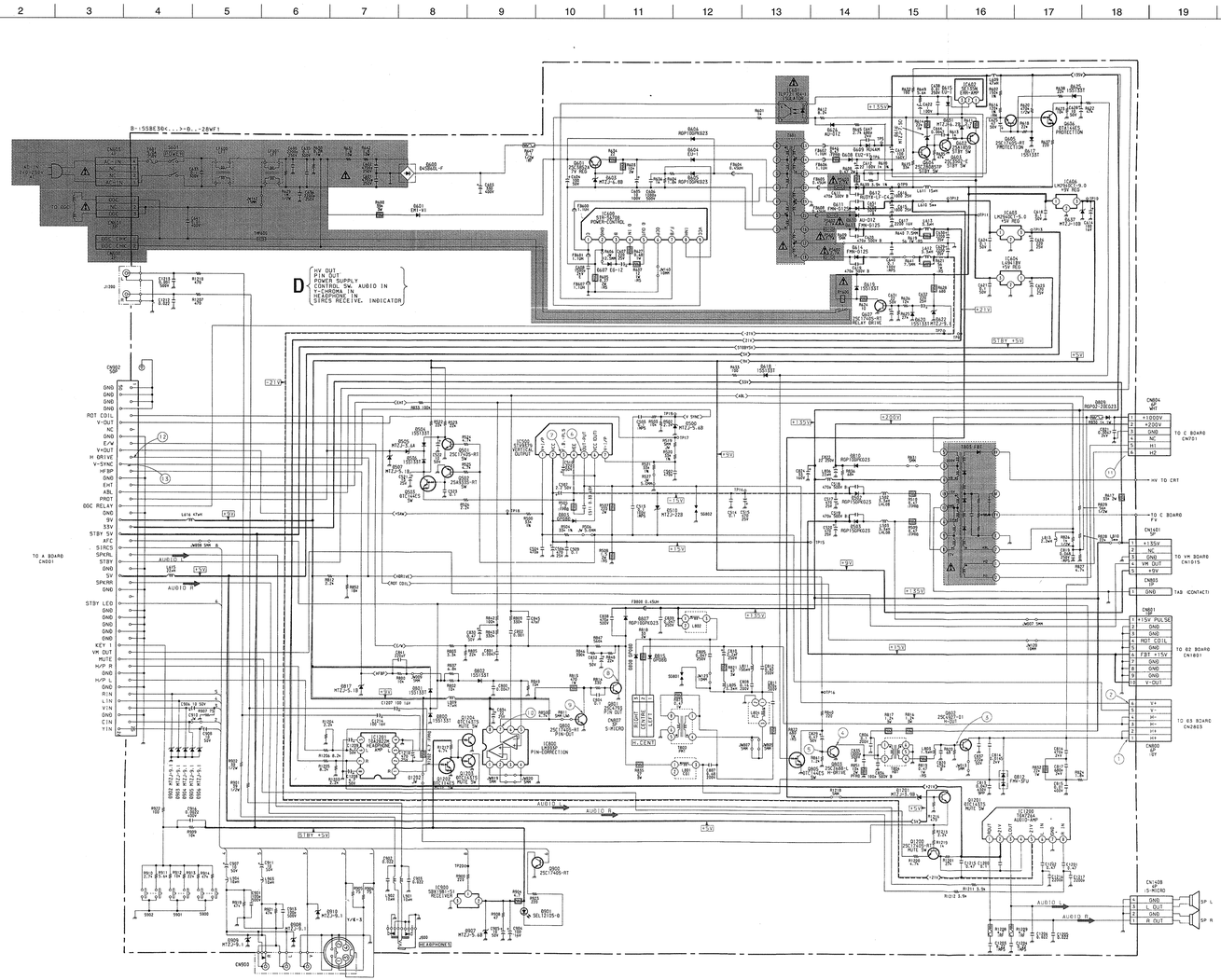
IC		DIODE	
IC500	G-13	D604	D-7
IC600	B-8	D605	C-6
IC601	D-6	D606	C-6
IC602	F-10	D607	C-7
IC603	G-5	D608	F-9
IC604	F-7	D609	F-9
IC606	E-6	D610	F-7
IC800	F-12	D611	F-6
IC900	D-1	D612	E-7
IC901	C-1	D613	F-8
IC1200	G-10	D614	F-8
IC1201	F-5	D615	H-7
TRANSISTOR		D616	G-7
Q501	H-14	D617	F-9
Q502	H-14	D618	F-11
Q503	H-14	D619	E-6
Q601	C-7	D620	E-6
Q602	G-7	D622	E-6
Q603	H-7	D625	G-9
Q604	G-7	D626	G-6
Q605	F-9	D631	F-6
Q606	H-7	D800	F-12
Q607	D-7	D801	G-12
Q800	F-12	D802	G-12
Q801	E-12	D803	F-13
Q802	A-11	D807	E-12
Q803	E-11	D808	E-14
Q805	F-10	D809	A-14
Q900	G-4	D810	A-13
Q1200	H-10	D812	B-11
Q1201	G-6	D815	E-14
Q1202	G-5	D817	H-11
Q1203	G-5	D901	C-1
Q1204	G-5	D902	I-5
DIODE		D903	H-4
D500	H-12	D904	H-5
D502	H-13	D905	I-5
D503	I-14	D906	I-5
D504	H-11	D907	G1
D505	H-13	D908	I4
D506	I-14	D909	G1
D507	H-13	D910	H1
D600	A-7	D1201	G-6
D601	C-6	D1202	G-5
D603	C-7		

D BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC500	1	1.5
	2	15.0
	3	-12.3
	4	-14.0
	5	0.1
	6	15.2
	7	1.4
IC600	1	170.0
	2	-62.4
	3	-62.6
	4	-62.2
	5	-62.0
	6	-62.6
	7	-62.4
	8	-62.0
	9	-58.0
IC601	1	64.3
	2	63.0
	3	-62.5
	4	-58.6
IC602	1	135.0
	2	63.2
	3	-0.1
IC800	3	0.9
	5	1.5
	6	2.0
	7	0.2
	8	9.0
IC1200	2	21.7
	4	21.5
	5	-21.7
IC1201	1	4.0
	2	9.0
	3	4.0
	5	0.5
	8	0.5

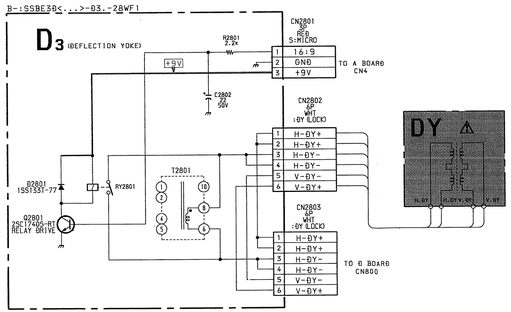
D BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q501	-0.1	0.2	-
Q502	0.1	-5.8	-
Q503	-5.8	-12.0	-12.0
Q602	72.0	7.5	72.7
Q603	0	72.0	-
Q604	0.7	-	-
Q605	0.5	-	0.3
Q606	-	-	12.0
Q607	-	12.0	-
Q800	0.2	3.1	-
Q801	0.3	17.0	-
Q802	-0.2	143.3	-
Q803	-0.6	99.8	-
Q805	-	3.6	-
Q900	-	5.4	-
Q1200	2.9	21.5	4.6
Q1201	3.4	5.0	3.0
Q1202	2.8	-	-



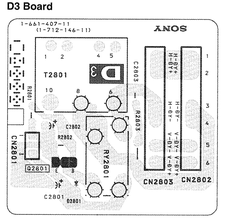
WAVEFORMS D BOARD

① 1.2K Vp-p (H)	② 56.0 Vp-p (V)	③ 13.0 Vp-p (H)	④ 178 Vp-p (H)
⑤ 2.6 Vp-p (H)	⑥ 56 Vp-p (V)	⑦ 31 Vp-p (V)	⑧ 140 Vp-p (H)
⑨ 3.9 Vp-p (H)	⑩ 1.0 Vp-p (H)	⑪ 28 Vp-p (H)	⑫ 3.0 Vp-p (H)
⑬ 5.5 Vp-p (V)			



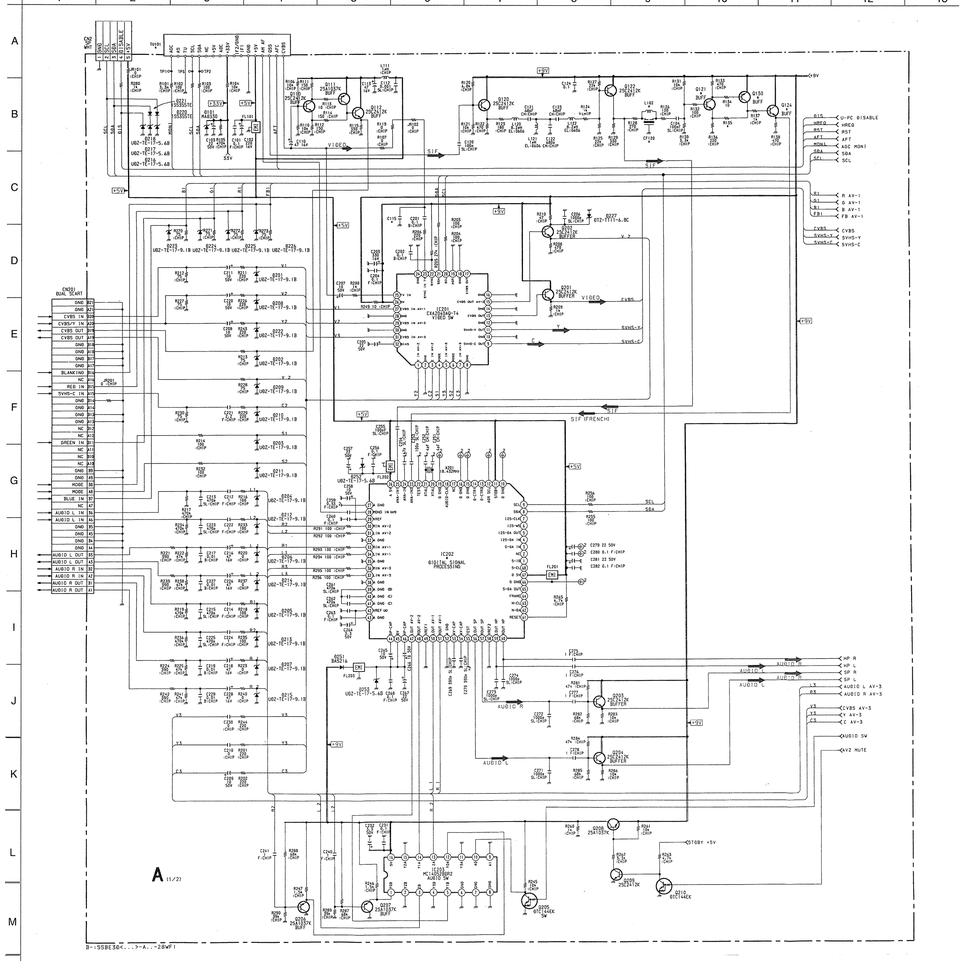
D3 [DEFLECTION YOKE]

D3 Board



D BOARD TRANSISTOR VOLTAGE TABLE

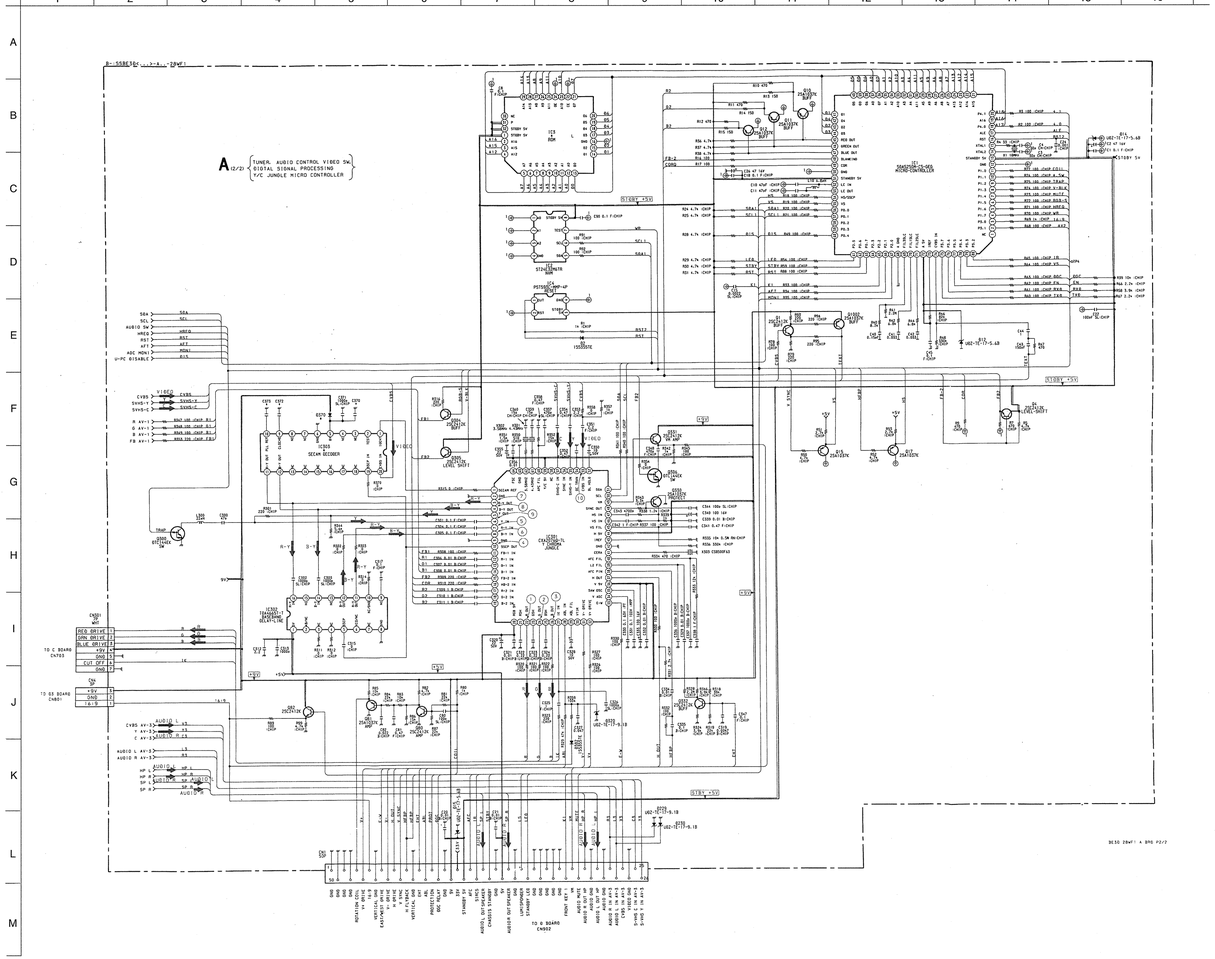
Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q501	-0.1	0.2	-	
Q502	0.1	-5.8	-	
Q503	-5.8	-12.0	-12.0	
Q602	72.0	7.5	72.7	
Q603	0	72.0	-	
Q604	0.7	-	-	
Q605	0.5	-	0.3	
Q606	-	-	12.0	
Q607	-	12.0	-	
Q800	0.2	3.1	-	
Q801	0.3	17.0	-	
Q802	-0.2	143.3	-	
Q803	-0.6	99.8	-	
Q805	-	3.6	-	
Q900	-	5.4	-	
Q1200	2.9	21.5	4.6	
Q1201	3.4	5.0	3.0	
Q1202	2.8	-	-	



A 1/2/21

A BOARD * MARK

Ref No. / Mark No.	28WF1A	28WF1B	28WF1D	28WF1E	28WF1K	28WF1R	28WF1U
C115	--	330PF	--	--	--	--	--
C370	--	2.2UF	2.2UF	2.2UF	2.2UF	2.2UF	--
C372	--	0.1UF	0.1UF	0.1UF	0.1UF	0.1UF	--
C373	--	0.22UF	0.22UF	0.22UF	0.22UF	0.22UF	--
CF120	TRAP 6.5MHz	TRAP 6.5MHz	TRAP 6.5MHz	TRAP 6.5MHz	--	--	--
D370	--	BA5216	BA5216	BA5216	BA5216	BA5216	--
IC3	TMS27PC010A-15FMB6006	TMS27PC010A-15FML	TMS27PC010A-15FML	TMS27PC010A-15FML	TMS27PC010A-15FMB6006	TMS27PC010A-15FMB6006	TMS27PC010A-15FML
IC202	MSP3400C-PS-C6-T	MSP4410B-PS-F7-T	MSP3400C-PS-C6-T	MSP3410B-PS-F7-T	MSP3400C-PS-C6-T	MSP3400C-PS-C6-T	MSP3410B-PS-F7-T
IC303	--	TDA8305T/N3	TDA8305T/N3	TDA8305T/N3	TDA8305T/N3	TDA8305T/N3	--
L102	5.6UH	5.6UH	5.6UH	5.6UH	--	--	--
Q121	2SC2141K-T-146-R	2SC2141K-T-146-R	2SC2141K-T-146-R	2SC2141K-T-146-R	--	--	--
Q124	2SC2141K-T-146-R	2SC2141K-T-146-R	2SC2141K-T-146-R	2SC2141K-T-146-R	--	--	--
Q130	2SA1037K-T-146-R	2SA1037K-T-146-R	2SA1037K-T-146-R	2SA1037K-T-146-R	--	--	--
R135	330	330	330	330	680	680	680
TU101	TUV1F (AEP)	TUV1F (FR)	TUV1F (AEP)	TUV1F (AEP)	TUV1F (AEP)	TUV1F (AEP)	TUV1F (UK)



A (2/2) TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING, SYC JUNGLE MICRO CONTROLLER

A(1/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC201	13	4.4
	15	4.4
	20	3.5
	21	2.7
	22	4.9
	23	4.4
	24	0
	25	4.4
	26	8.8
	32	4.4
IC202	4	2.8
	6-7	0.1
	8	3.0
	9	3.6
	11	4.7
	13	4.7
	20-21	2.4
	23	0.2
	25	1.5
	26	4.8
	28	3.8
	29	2.6
	39-42	3.8
	44	7.1
	45	8.0
	46	7.1
	47-48	3.8
	53-54	3.8
IC203	1	4.7
	3	3.8
	5	3.8
	10	9.0
	12	4.7
	13	3.8
	14	3.8

A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q1	3.7	4.8	3.1	
Q4	0.1	4.8	-	
Q15	-	4.3	-	
Q80	2.6	2.2	-	
Q81	2.4	-	3.0	
Q300	-	0.2	-	
Q304	-	4.8	-	
Q305	-	4.8	-	
Q306	-	0.1	-	
Q330	4.5	-	5.1	
Q331	6.3	8.8	5.7	
Q332	3.1	8.8	2.5	
Q1001	4.4	-	-	

A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q110	1.8	8.2	1.2	
Q112	1.5	8.8	0.8	
Q113	1.8	-	-	
Q114	5.4	6.0	-	
Q120	9.0	8.8	3.7	
Q121	1.5	5.4	0.9	
Q122	5.4	8.8	4.7	
Q124	-	8.8	-	
Q130	8.2	5.3	-	
Q201	4.4	8.8	3.7	
Q202	4.4	8.8	3.7	
Q205	-	8.9	-	
Q206	4.1	-	4.7	
Q207	4.1	-	4.7	

WAVEFORMS A BOARD

① 3.5 Vp-p (H)	② 3.0 Vp-p (H)	③ PAL.SECAM 3.0 Vp-p (H)	③ NTSC 2.3 Vp-p (H)	④ 5.1 Vp-p (H)
⑤ 1.0 Vp-p (H)	⑥ 1.4 Vp-p (H)	⑦ PAL.NTSC 0.6 Vp-p (H)	⑦ SECAM 0.5 Vp-p (H)	⑧ PAL 0.8 Vp-p (H)
⑧ SECAM 1.5 Vp-p (H)	⑧ NTSC 0.9 Vp-p (H)	⑨ PAL.SECAM 0.5 Vp-p (H)	⑨ NTSC 0.4 Vp-p (H)	⑩ 1.0 Vp-p (H)

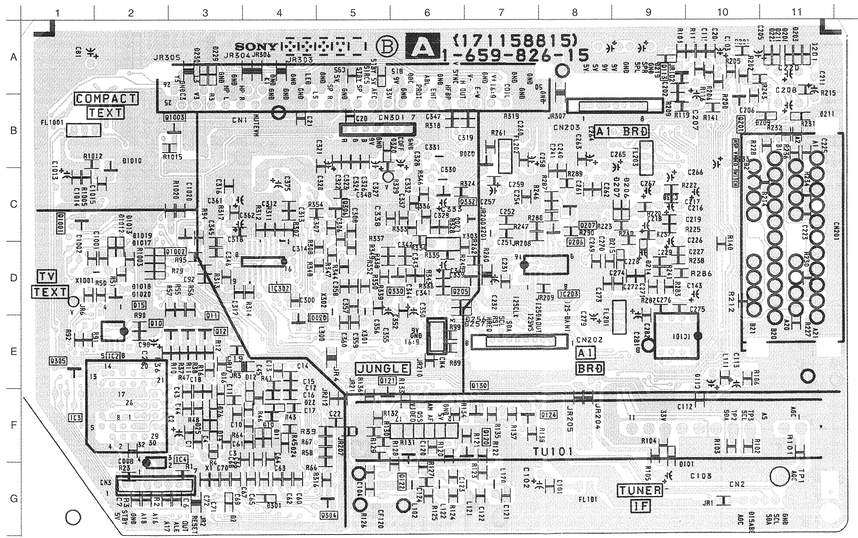
A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table

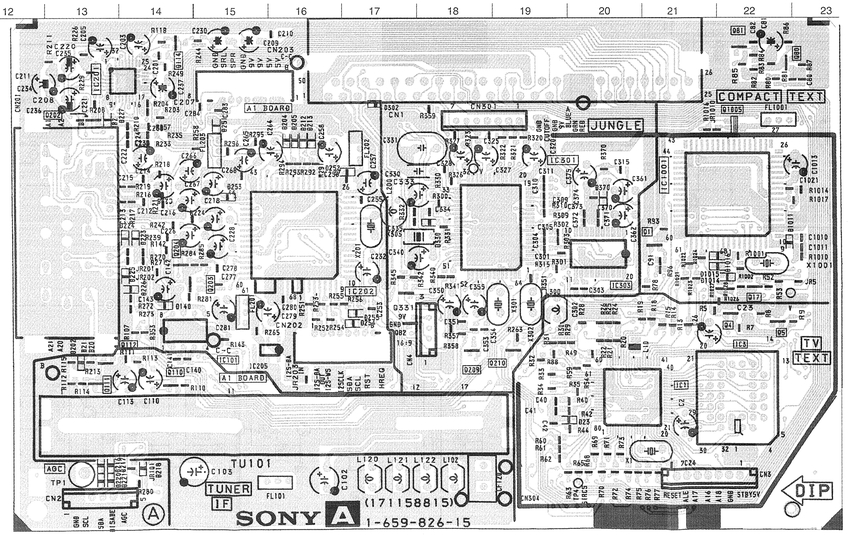
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC1	2	3.6	IC301	5	3.6	IC301	61	5.0
	3-4	4.8		6	5.0		62	7.6
	5	0.5		7-8	5.4	IC302	1	4.8
	7	4.8		10	0.6		5	0.7
	9	4.8		12-14	5.4		9	4.8
	11	2.4		16	4.0		11-12	3.0
	13	4.8		17-19	5.4		14	1.3
	14-15	2.3		20	8.8		16	1.3
	16-17	4.8		22-23	2.2	IC303	1	1.5
	48	4.0		24	2.0		5	8
	51	4.8		25	2.4		11-12	5.6
	52-53	2.4		26	2.0		19	0.6
	54	0.7		27	4.0		20	3.9
	55	0.2		28	6.6	IC1001	4	0.2
	56-57	4.8		29	8.8		5	0.7
	58	2.8		31-33	3.0		6	1.7
	59	3.5		34	4.0		7	1.8
	60	2.4	IC301	35	4.6		10	0.4
	62	0.7		36	8.8		11-12	4.8
	63	4.4		37	3.1		16	4.8
	65	4.8		38	3.4		17	0
	66	2.1		39	5.3		21	4.8
	67	2.0		40	4.2		23	3.0
	69-71	2.3		41	2.3		25	4.8
	72	4.8		43	1.7		56	0
	73	1.5		44	8.8		61	1.3
	74	1.2		45	2.5		62-63	1.4
	75-77	4.8		46	3.9		64	0
	79	0.2		47	3.0		66	4.6
	80	4.8		48	4.4		67	4.7
IC2	5-8	4.8		49	6.3		68	4.0
IC3	1	4.8		50-51	0.1			
	31-32	4.8		53	3.9			
IC4	1	4.8		54	5.0			
	3	4.8		55-56	4.2			
IC301	1	1.5		58-59	8.8			
	3-4	5.6		60	5.3			

A [TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING Y/C JUNGLE MICRO CONTROLLER]

A Board < Conductor Side >

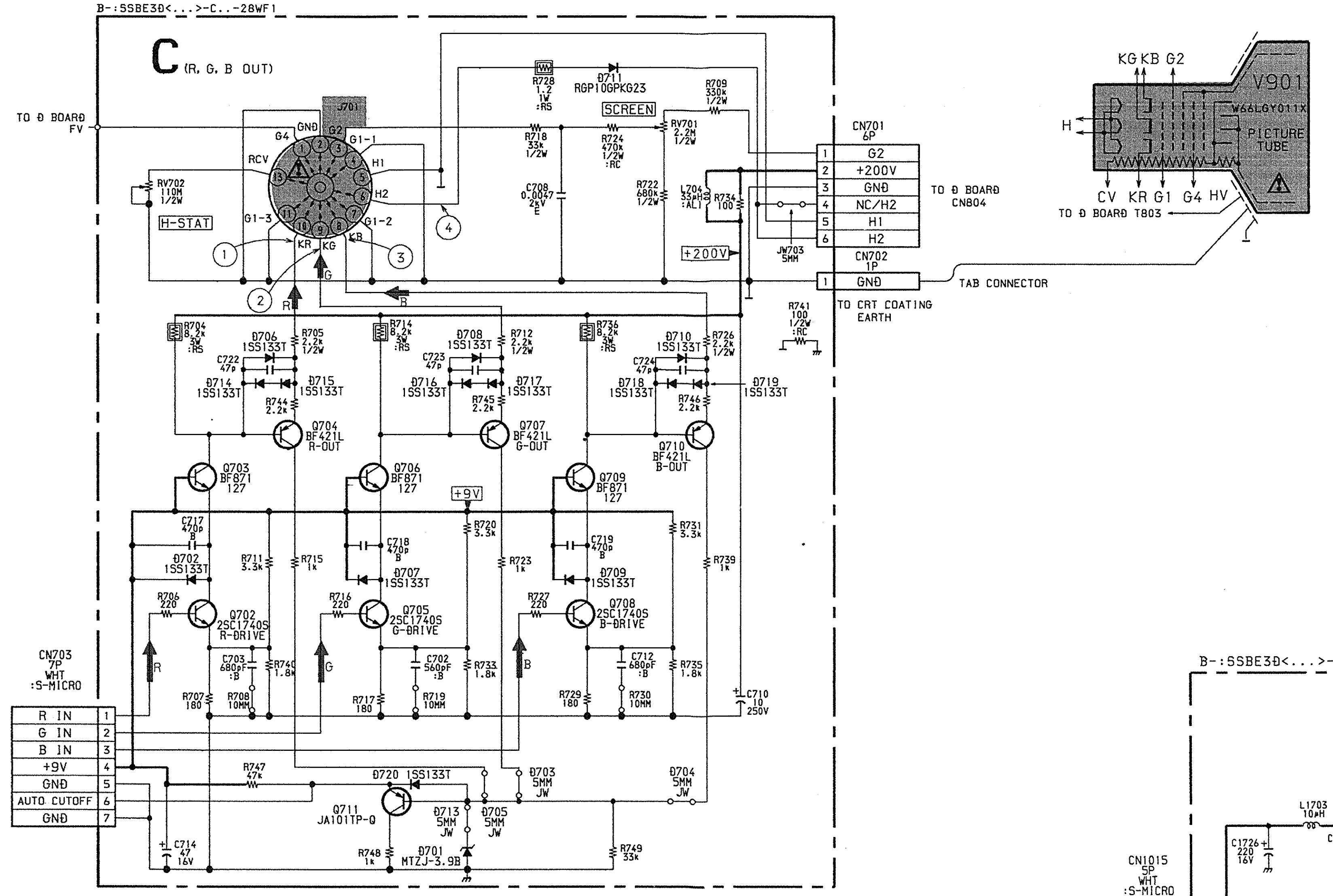


A Board < Component Side >

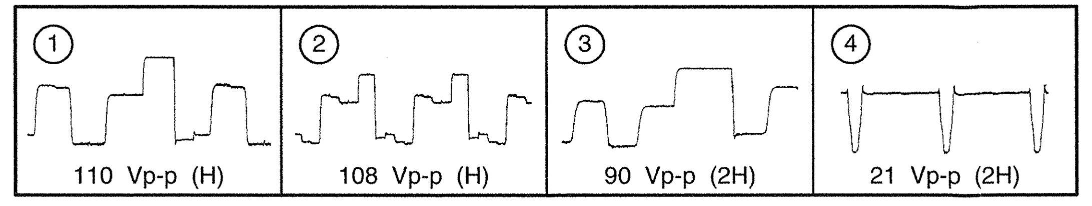


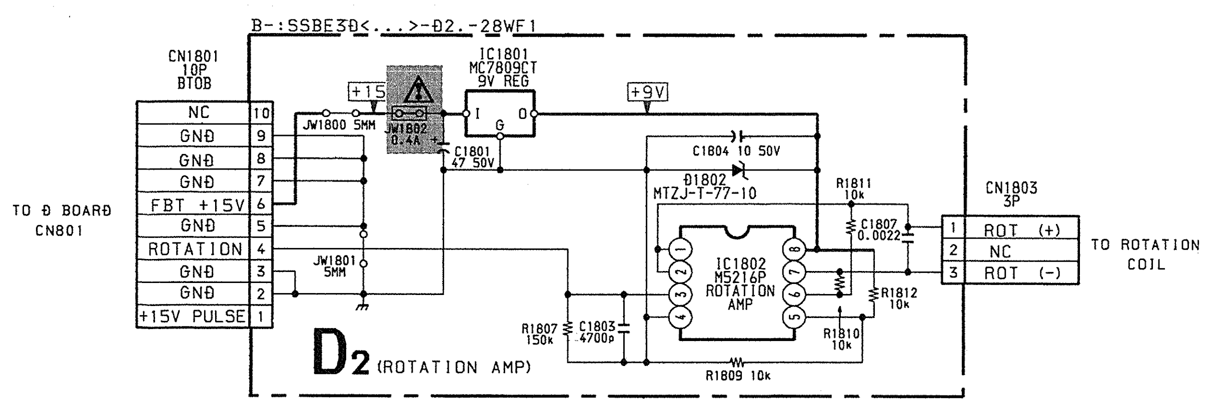
A BOARD

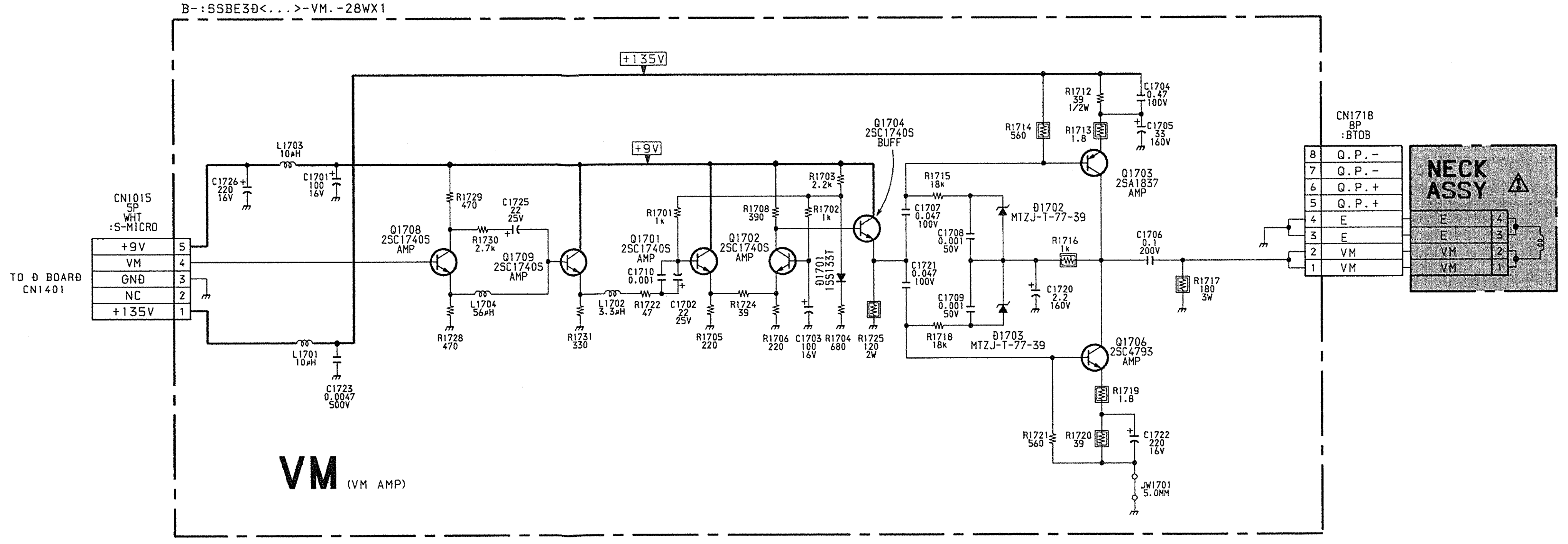
IC		Q210	E-19
IC1	F-21	Q300	E-4
IC2	E-2	Q304	G-5
IC3	F-2	Q305	E-1
IC4	G-2	Q306	C-5
IC201	A-14	Q330	D-6
IC202	C-16	Q331	D-18
IC203	D-8	Q332	C-6
IC301	C-19	Q1001	C-1
IC302	D-4	Q1002	C-3
IC303	D-21	DIODE	
IC1001	F-2	D2	G-3
TRANSISTOR		D101	F-9
Q1	D-21	D201	A-11
Q4	E-22	D202	E-13
Q10	E-2	D203	A-11
Q11	E-3	D206	C-9
Q12	E-3	D207	C-9
Q15	D-2	D208	A-11
Q17	D-23	D209	B-11
Q18	D-23	D210	A-11
Q80	A-23	D211	B-11
Q81	A-22	D214	D-9
Q110	F-14	D215	D-9
Q111	E-14	D216	G-14
Q112	E-14	D217	G-14
Q120	F-7	D218	G-14
Q121	F-5	D220	G-14
Q122	F-6	D221	D-14
Q124	F-7	D222	D-14
Q130	F-7	D223	D-14
Q201	B-10	D224	D-14
Q202	B-13	D225	D-14
Q205	D-7	D226	D-14
Q206	C-8	D251	B-15
Q207	C-8	D320	C-5
Q208	B-6	D370	C-21
Q209	E19	D1010	B-1



WAVEFORMS C BOARD

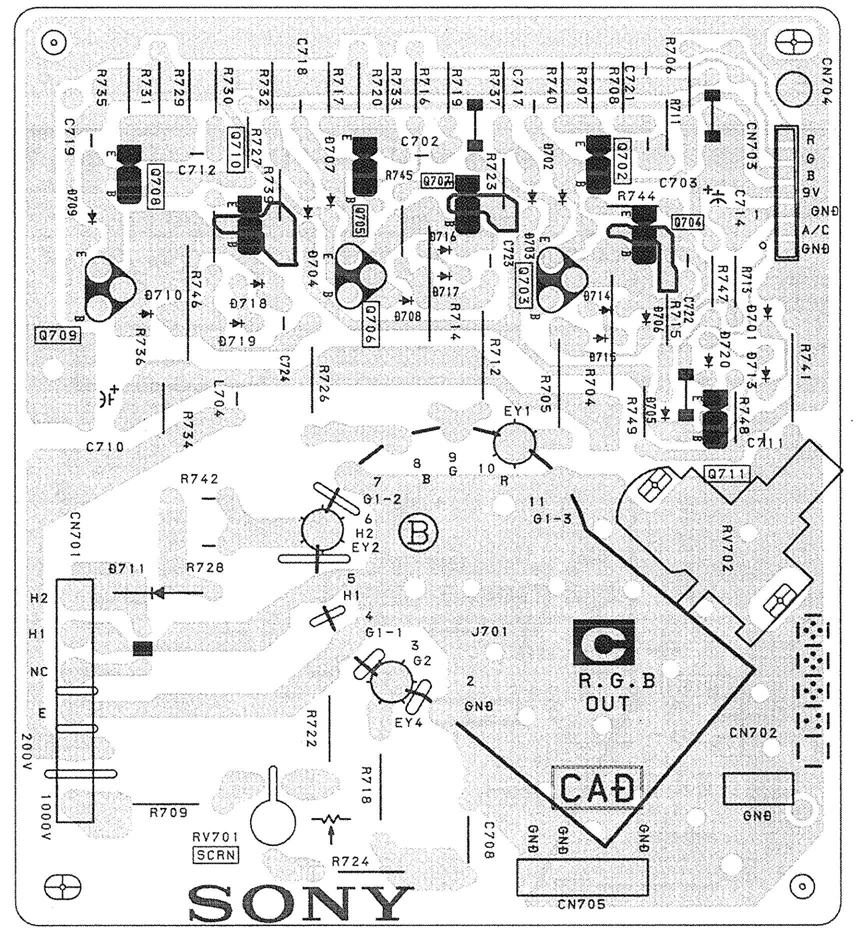




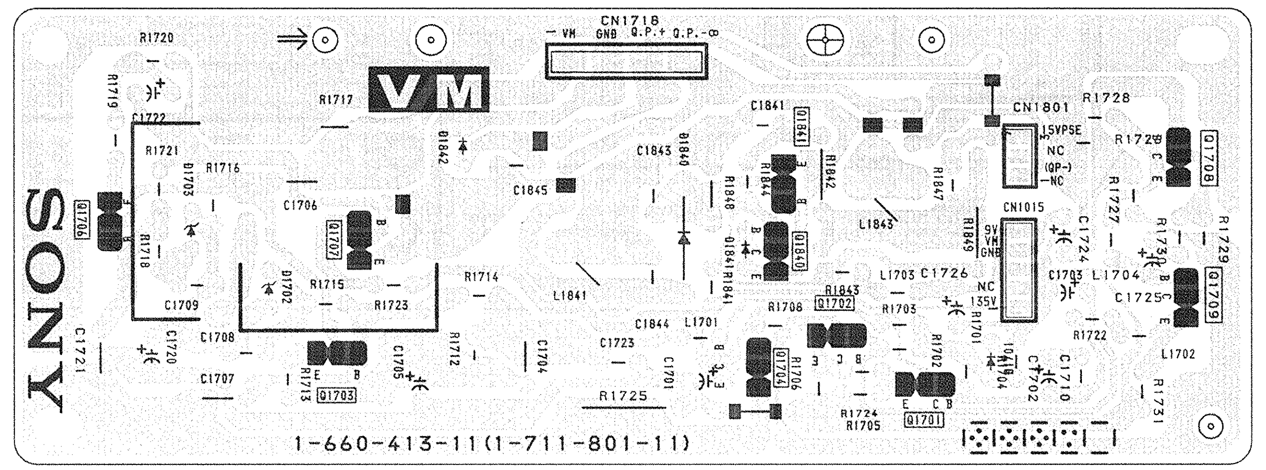


C [R, G, B OUT] VM [VM AMP]

C Board

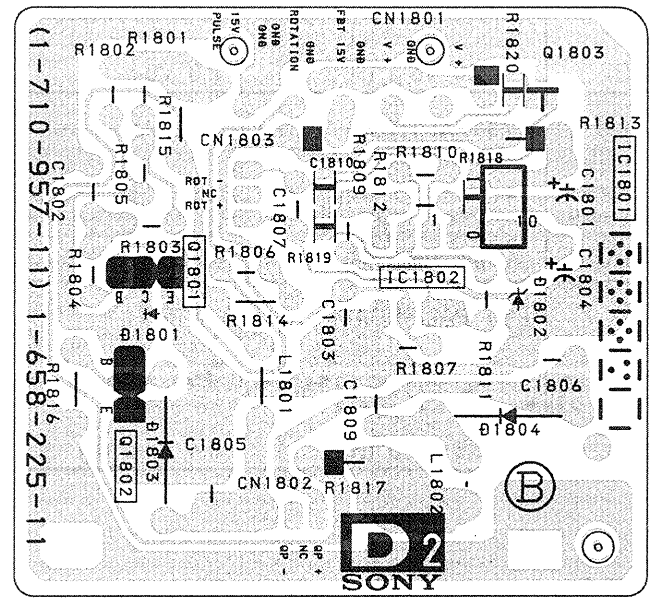


VM Board



D2 [ROTATION AMP]

D2 Board



C BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q702	2.0	11.4	1.4
Q703	12.0	168.3	11.4
Q704	168.3	6.0	163.5
Q705	1.7	11.4	1.2
Q706	12.0	178.8	11.4
Q707	178.2	6.2	173.8
Q708	2.0	11.4	1.4
Q709	12.0	168.3	11.4
Q710	168.0	6.4	160.0

VM BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

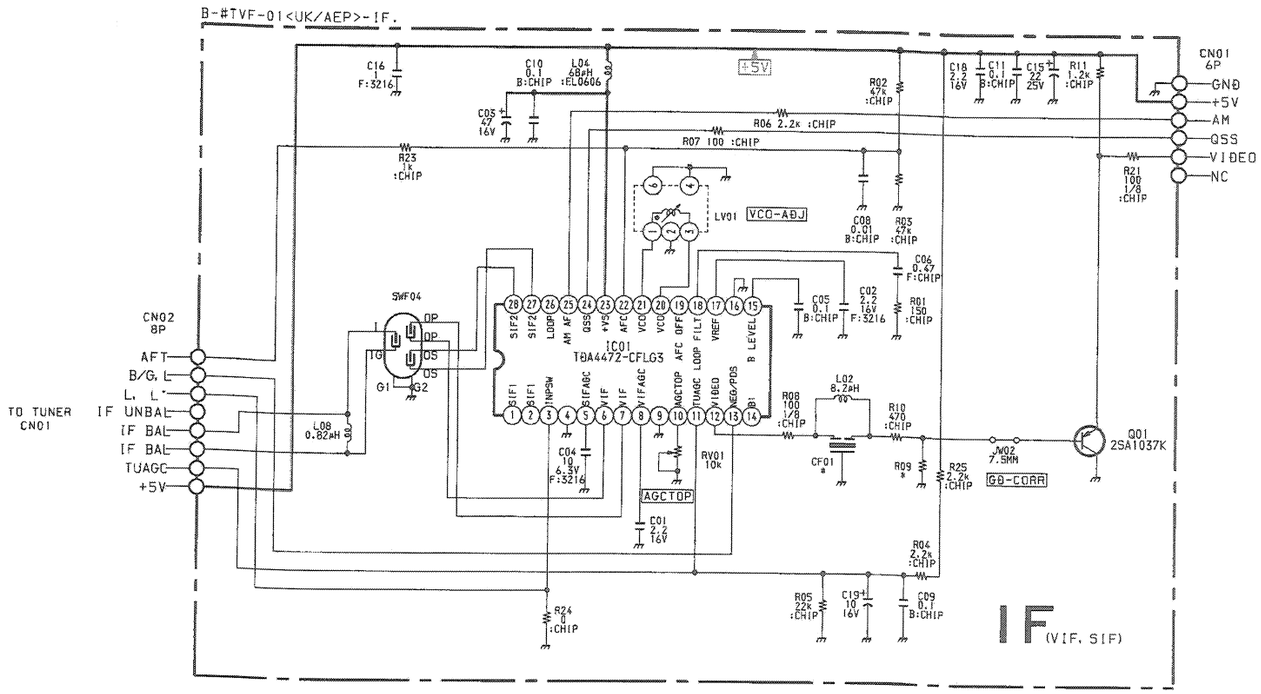
Ref No	B Base	C Collector	E Emitter
Q1701	2.5	8.8	1.8
Q1702	2.5	5.5	1.8
Q1703	134.3	71.8	134.8
Q1704	5.5	8.8	4.8
Q1706	1.0	71.8	0.4
Q1708	2.9	6.6	2.2
Q1709	2.2	8.8	1.5

D2 BOARD IC VOLTAGE TABLE

IC Voltage Table

Ref No	Pin No	Voltage (V)
IC1802	1-2	2.8
	3	3.0
	5-6	4.4
	7	6.2
	8	9.0

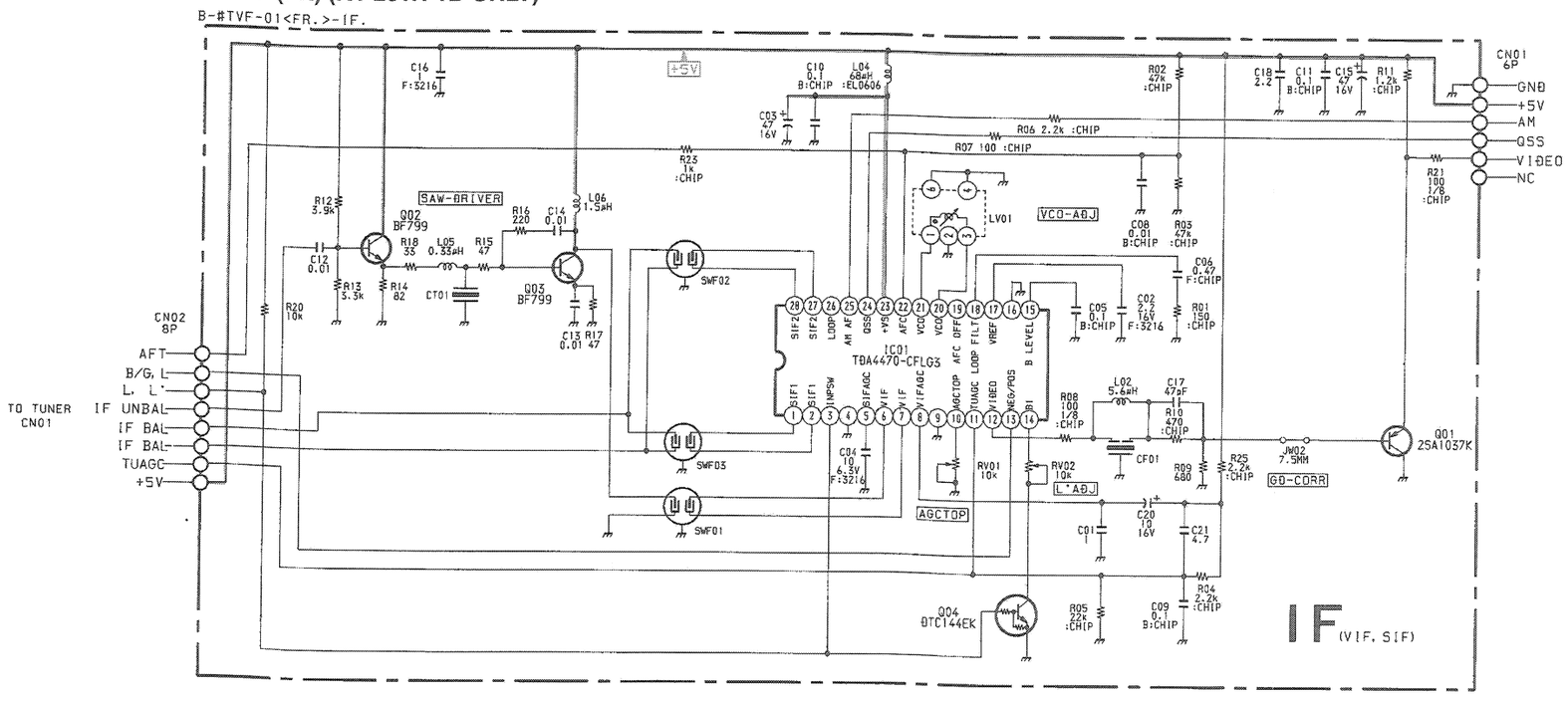
TUVIF (AEP) (KV-28WF1A, 28WF1D, 28WF1E, and 28WF1K, 28WF1R ONLY)
TUVIF (UK) (KV-28WF1U ONLY)



IF Board

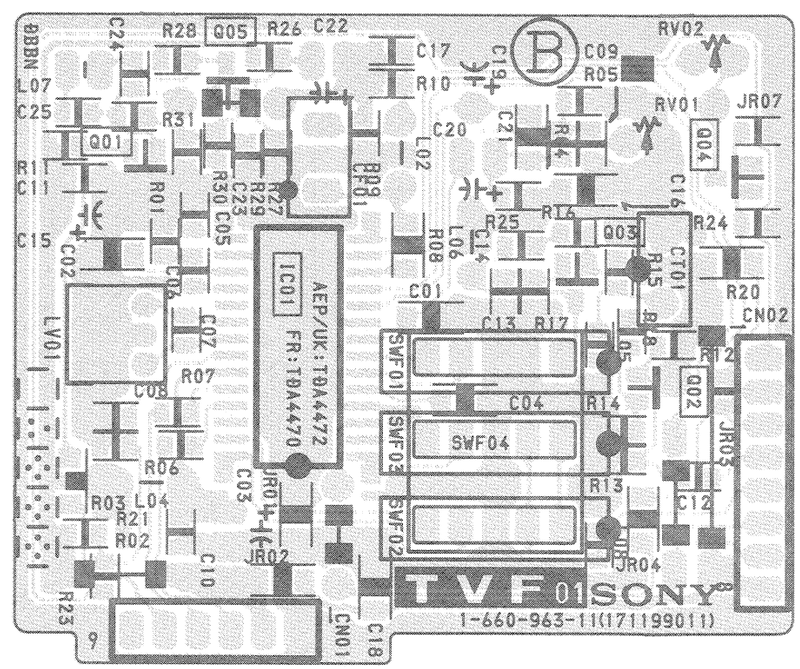
Ref. No \ Model	28WF1A	28WF1D	28WF1E	28WF1K	28WF1R	28WF1U
CF01	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz
R09	680MF	680MF	680MF	680MF	680MF	1K

TUVIF (FR) (KV-28WF1B ONLY)



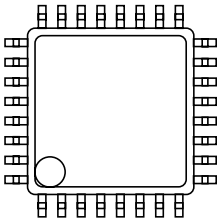
IF [VIF, SIF]

IF Board



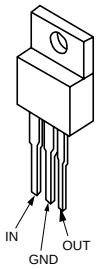
5-4. SEMICONDUCTORS

CXA2040Q-T4

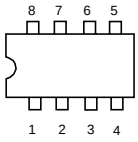


(TOP VIEW)

L4941BV
TEA7605

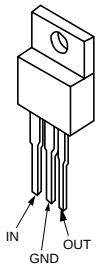


LM393P
M5216P
TDA2822M
µPC393C

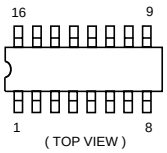


(TOP VIEW)

LM2940CT-5.0
LM2940CT
LM2940T-9.0
MCT7809CT
NJM78M09FA
µPC2405HF

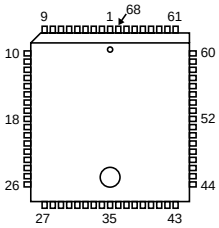


MC14052BDR2



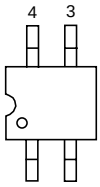
(TOP VIEW)

MSP3400C-PS-C6-T
MSP3410B-PS-F7-T



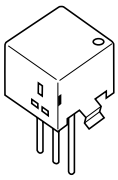
(TOP VIEW)

PST593C-MMP-4P

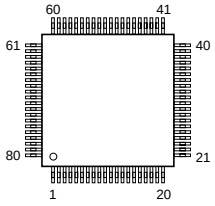


(TOP VIEW)

SBX1790-51

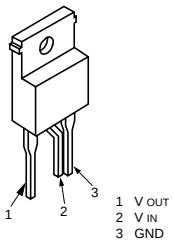


SDA5250M-C5-GEG

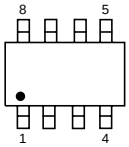


(TOP VIEW)

SE135N

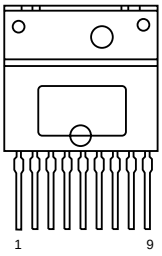


ST24E32M6TR

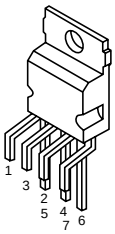


(TOP VIEW)

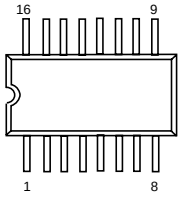
STR-S6708



STV9379

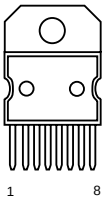


TDA4665T-T

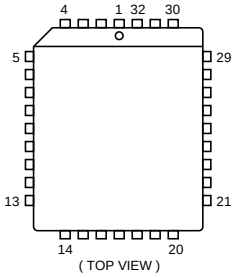


(TOP VIEW)

TDA7264

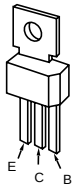


TMS27PC010A-15FML

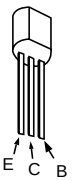


(TOP VIEW)

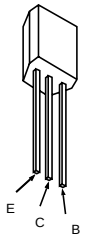
BF871-127



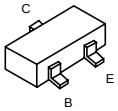
BF421L-AMMO
JA101TP-Q
2SA733-K
2SA933AS
2SA933S
2SA1091-O
2SC3502-E
2SC3601-E
2SC2808STP-R



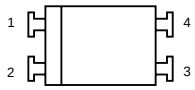
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SC1740S-RT



DTC144EK
2SA1037K
2SA1162-G
2SC2412K



TLP721(D4-)



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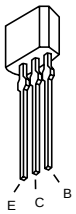
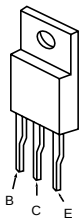
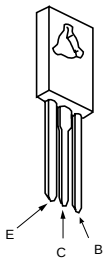


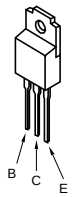
2SA1837



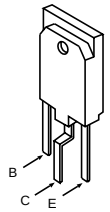
2SC2688-LK



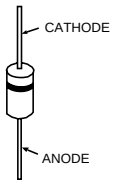
2SC4793



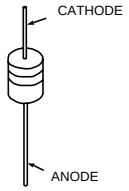
2SC4927-01



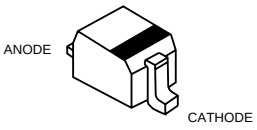
AU-01Z-V1
EG-1Z-V1
EGP20G
EL1Z
EM1-V1
EU-1-V1
EU2A
EU2-V1
FML-G12S
GP08D
RGP02
RGP10GPKG23
RGP15GPKG23
RU3YX-V1
RU4AM-T3
RU4DS



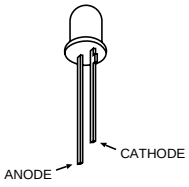
MTZJ-3.6A
MTZJ-3.9B
MTZJ-5.1B
MTZJ-5.6B
MTZJ-6.2B
MTZJ-6.8B
MTZJ-7.5C
MTZJ-9.1
MTZJ-T-77-9.1A
MTZJ-10
MTZJ-39
RD3.9ESB2
RD5.1ESB2
RD5.6ESB2
RD6.2ESB2
RD6.8ESB2
RD7.5ESB2
RD10ESB2
RD39ES-B2
1SS133T-77



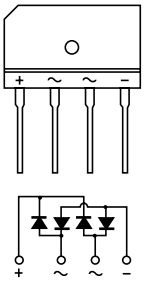
BAS216
DTZ6.8C
DTZ9.1
DTZ33B
MA8330
1SS355
UDZ-TE-17-5.6B
UDZ-TE-17-9.1B



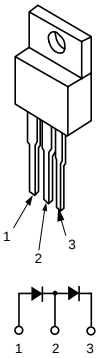
SLA-570KT3F



D4SB60L



FMS-3FU



SECTION 6

EXPLODED VIEWS

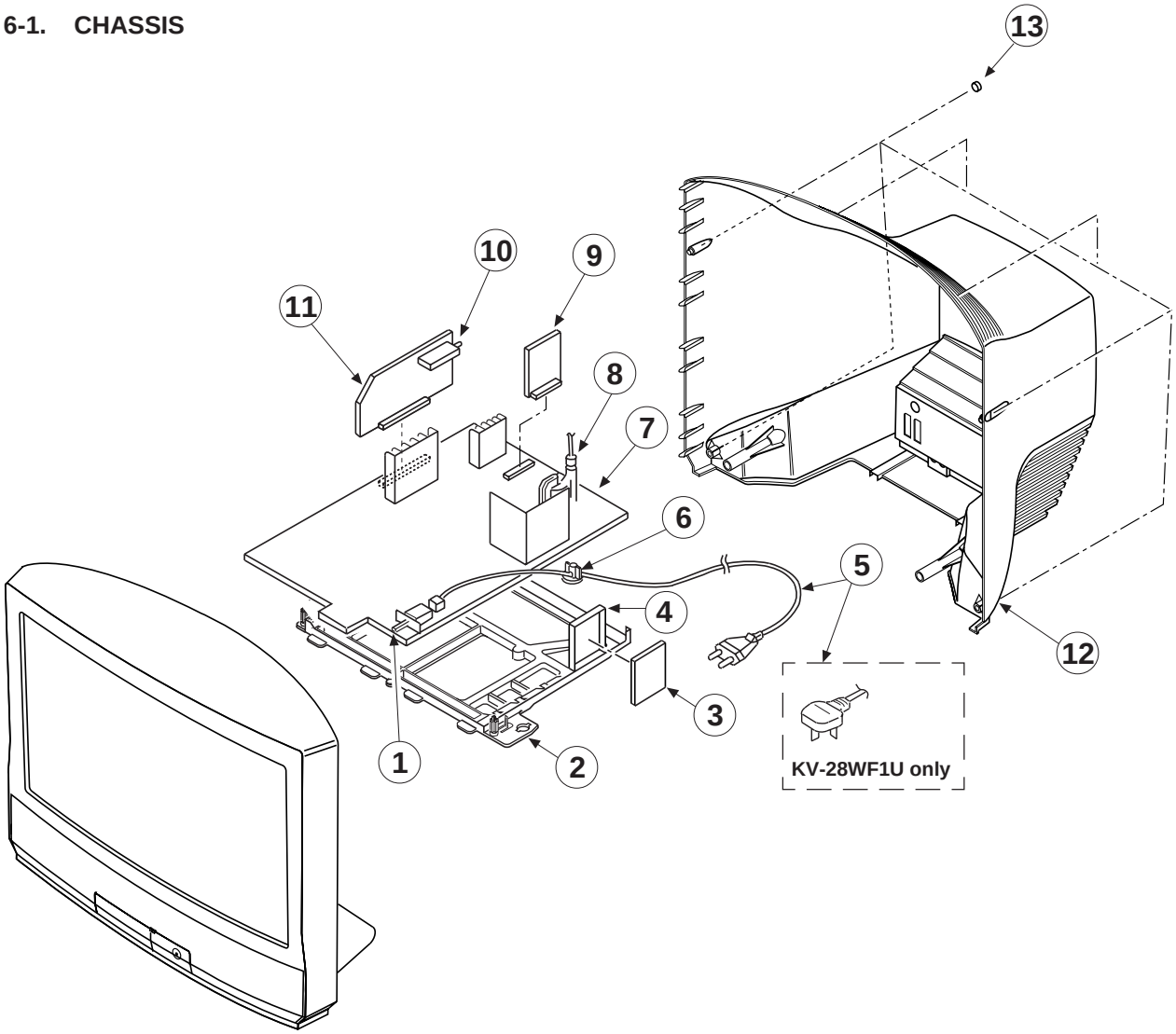
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

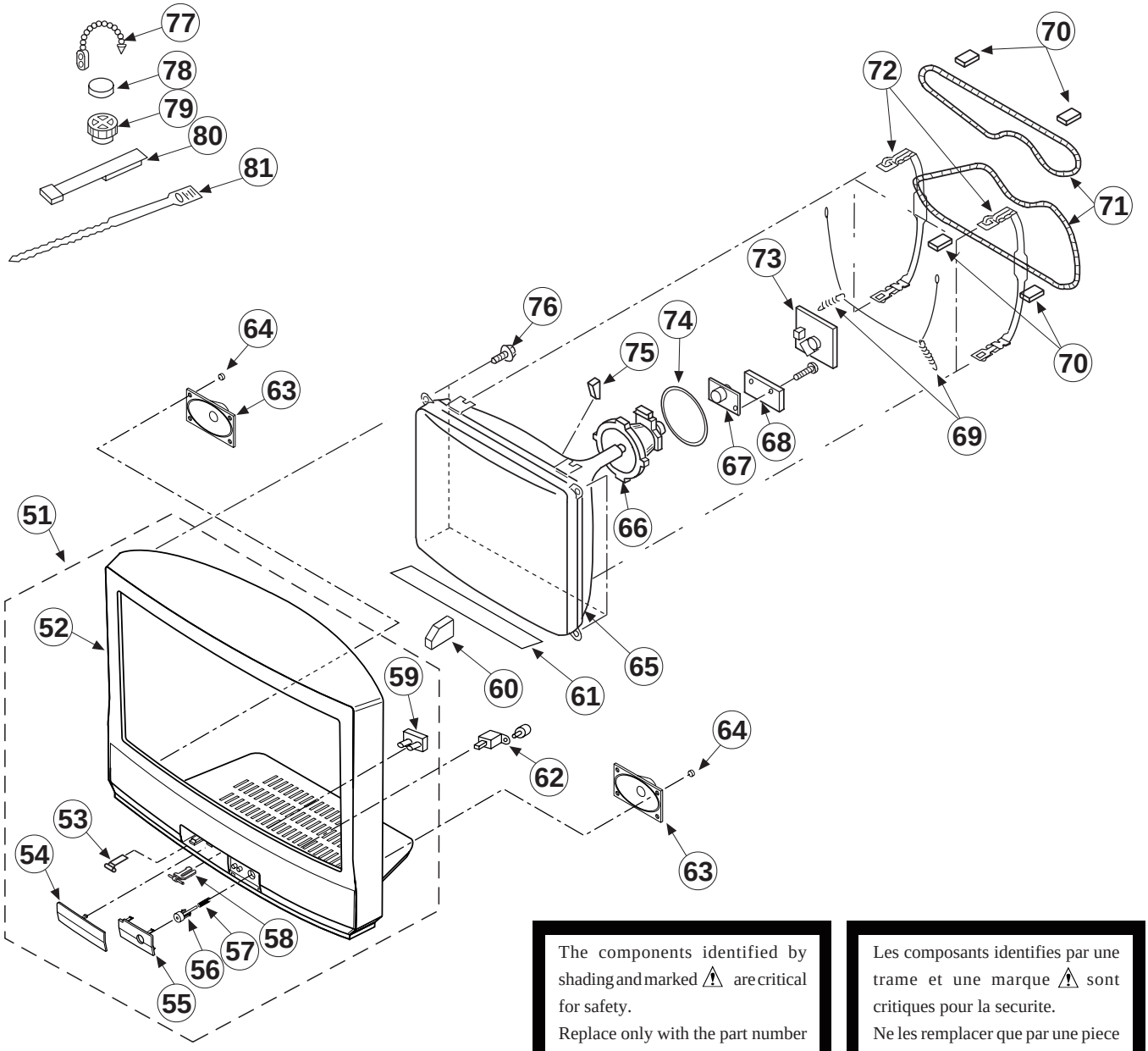
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS



REF NO		PART NO	DESCRIPTION	REMARK
1	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
2		*4-203-315-01	BRACKET, MAIN	
3		*A-1640-235-A	D3 BOARD, COMPLETE	
4		*4-203-404-01	BRACKET, D3	
5	⚠	1-765-286-11	CORD, POWER 2.5A/250V	(KV-28WF1A/28WF1B/28WF1D/28WF1E/28WF1K/28WF1R)
	⚠	1-776-204-12	CORD, POWER (FILTER) 3A/250V	(KV-28WF1U)
6	⚠	*4-202-531-01	AC CORD LOCK (SC)	
7		*A-1642-208-A	D BOARD, COMPLETE	
8	⚠	1-453-220-11	TRANSFORMER ASSY, FLYBACK	(UX-1670/U12B4)
9		*A-1640-214-A	D2 BOARD, COMPLETE	
10		1-693-338-11	TUNER (TUVIF) (AEP)	(KV-28WF1A/28WF1D/28WF1E/28WF1K/28WF1R)
		1-693-340-11	TUNER (TUVIF) (FR)	(KV-28WF1B)
		1-693-339-11	TUNER (TUVIF) (UK)	(KV-28WF1U)
11		*A-1632-673-A	A BOARD, COMPLETE	(KV-28WF1A)
		*A-1632-670-A	A BOARD, COMPLETE	(KV-28WF1B)
		*A-1632-671-A	A BOARD, COMPLETE	(KV-28WF1D)
		*A-1632-672-A	A BOARD, COMPLETE	(KV-28WF1E)
		*A-1632-675-A	A BOARD, COMPLETE	(KV-28WF1K)
		*A-1632-674-A	A BOARD, COMPLETE	(KV-28WF1R)
		*A-1632-676-A	A BOARD, COMPLETE	(KV-28WF1U)
12		4-203-775-01	COVER, REAR	
13		7-685-663-79	(+) BV TP 4X16 TYPE 2 IT-3	

6-2. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO		PART NO	DESCRIPTION	REMARK
51		X-4200-344-1	BEZNET ASSY	52-59 (KV-28WF1A/28WF1D/ 28FW1K/28WF1R)
		X-4200-344-2	BEZNET ASSY	(KV-28WF1B/28WF1E 28WF1U)
52		4-203-774-01	BEZNET	
53		3-703-035-11	SHAFT, LID	
54		4-203-723-01	DOOR	(KV-28WF1A/28WF1D/ 28WF1K/28WF1R)
		4-203-723-11	DOOR	(KV-28WF1B/28WF1E/ 28WF1U)
55		4-203-724-01	WINDOW, ORNAMENTAL	
56		4-203-722-01	BUTTON, POWER	
57		4-202-964-01	SPRING	
58		4-045-250-01	DAMPER	
59		4-203-739-01	GUIDE LIGHT	
60		4-203-870-01	SUPPORTER, CRT	
61		4-203-128-11	SHEET BLOTTING	
62		4-042-940-21	UNIT LOCK	
63		1-505-782-11	SPEAKER, LOUD	
64		7-685-661-14	SCREW + BV TP (4X12) TYPE2 IT3	
65	⚠	8-737-773-05	PICTURE TUBE (SD-284T) (W66LGY011X)	
66	⚠	8-451-434-21	DEFLECTION YOKE (Y28GIAM)	
67	⚠	8-453-005-51	NECK ASSY (NA297-M5)	
68		*A-1644-070-A	VM BOARD, COMPLETE	
69		4-200-433-11	SPRING, EXTENSION	
70		*4-203-390-11	CUSHION, DGC	
71	⚠	1-411-893-11	COIL, DEGAUSSING	
72		4-203-769-01	DGC, HOLDER (28")	
73		*A-1638-081-A	C BOARD, COMPLETE	
74		1-452-724-11	COIL, NA ROTATION (RT-165)	
75		3-704-495-01	SPACER, DY	
76		4-203-043-01	SCREW (M), PT	
77		4-308-870-00	CLIP, LEAD WIRE	
78		1-452-032-00	MAGNET, DISK; 10MM Ø	
79		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
80		X-4387-214-1	PERMALLOY ASSY, CORRECTION	
81		3-701-007-00	BAND, BINDING	

SECTION 7
ELECTRICAL PARTS LIST

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference munber, please include the board name.

CAPACITORS MF : mF , PF : mmF

COILS MMH : mH , µH : mH

A

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1632-673-A	A BOARD COMPLETE (KV-28WF1A) **********		
	*A-1632-670-A	A BOARD COMPLETE (KV-28WF1B) **********		
	*A-1632-671-A	A BOARD COMPLETE (KV-28WF1D) **********		
	*A-1632-672-A	A BOARD COMPLETE (KV-28WF1E) **********		
	*A-1632-675-A	A BOARD COMPLETE (KV-28WF1K) **********		
	*A-1632-674-A	A BOARD COMPLETE (KV-28WF1R) **********		
	*A-1632-676-A	A BOARD COMPLETE (KV-28WF1U) **********		
	1-750-797-11	SOCKET, PLCC		
		< CAPACITOR >		
C1	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C2	1-126-967-11	ELECT 47MF	20%	16V
C3	1-163-104-00	CERAMIC CHIP 30PF	5%	50V
C4	1-163-104-00	CERAMIC CHIP 30PF	5%	50V
C8	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C10	1-163-243-91	CERAMIC CHIP 47PF	10%	50V
C11	1-163-243-91	CERAMIC CHIP 47PF	10%	50V
C15	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	50V
C18	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C20	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C21	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C22	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C24	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C26	1-104-660-91	ELECT 47MF	20%	16V
C40	1-164-492-11	CERAMIC CHIP 0.15MF	10%	16V
C41	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C42	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C43	1-163-121-91	CERAMIC CHIP 150PF	10%	50V
C44	1-164-346-11	CERAMIC CHIP 1MF		16V
C45	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C80	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C81	1-126-959-11	ELECT 0.47MF	20%	50V
C82	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C90	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C101	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C102	1-126-934-11	ELECT 220MF	20%	16V
C103	1-126-965-11	ELECT 22MF	20%	50V
C104	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C110	1-126-967-11	ELECT 47MF	20%	16V
C112	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C113	1-126-967-11	ELECT 47MF	20%	16V
C115	1-163-129-00	CERAMIC CHIP 330PF	5%	50V (KV-28WF1B)
C120	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C121	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C122	1-163-137-00	CERAMIC CHIP 680PF	5%	50V
C123	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C124	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C201	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C202	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C203	1-104-661-91	ELECT 330MF	20%	16V
C204	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C205	1-126-965-11	ELECT 22MF	20%	50V
C206	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C207	1-126-964-11	ELECT 10MF	20%	50V
C208	1-126-964-11	ELECT 10MF	20%	50V
C209	1-126-964-11	ELECT 10MF	20%	50V
C210	1-216-295-00	CONDUCTOR, CHIP	(2012)	
C211	1-126-964-11	ELECT 10MF	20%	50V
C212	1-164-346-11	CERAMIC CHIP 1MF		16V
C213	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C214	1-164-346-11	CERAMIC CHIP 1MF		16V
C215	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C216	1-126-967-11	ELECT 47MF	20%	16V
C217	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C218	1-126-967-11	ELECT 47MF	20%	16V
C219	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C220	1-126-964-11	ELECT 10MF	20%	50V
C221	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C222	1-164-346-11	CERAMIC CHIP 1MF		16V
C223	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C224	1-164-346-11	CERAMIC CHIP 1MF		16V
C225	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C226	1-126-967-11	ELECT 47MF	20%	16V
C227	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C228	1-126-967-11	ELECT 47MF	20%	16V
C229	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C230	1-216-295-00	CONDUCTOR, CHIP	(2012)	
C231	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C232	1-126-962-11	ELECT 3.3MF	20%	50V
C240	1-164-346-11	CERAMIC CHIP 1MF		16V
C241	1-164-346-11	CERAMIC CHIP 1MF		16V
C251	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V
C252	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V
C253	1-163-117-00	CERAMIC CHIP 100PF	5%	50V

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REF.NO.	PART NO.	DESCRIPTION		REMARK
C254	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C255	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C256	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C257	1-126-965-11	ELECT 22MF	20%	50V
C258	1-126-964-11	ELECT 10MF	20%	50V
C259	1-164-336-11	CERAMIC CHIP 0.33MF		25V
C260	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C261	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C262	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C263	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C264	1-126-962-11	ELECT 3.3MF	20%	50V
C265	1-126-964-11	ELECT 10MF	20%	50V
C266	1-126-964-11	ELECT 10MF	20%	50V
C267	1-126-965-11	ELECT 22MF	20%	50V
C268	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C269	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C270	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C271	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C272	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C273	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C274	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C275	1-164-346-11	CERAMIC CHIP 1MF		16V
C276	1-164-346-11	CERAMIC CHIP 1MF		16V
C277	1-164-346-11	CERAMIC CHIP 1MF		16V
C278	1-164-346-11	CERAMIC CHIP 1MF		16V
C279	1-126-965-11	ELECT 22MF	20%	50V
C280	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C281	1-126-965-11	ELECT 22MF	20%	50V
C282	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C300	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C301	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C302	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C303	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C304	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C305	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C306	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C307	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C308	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C309	1-164-346-11	CERAMIC CHIP 1MF		16V
C310	1-164-346-11	CERAMIC CHIP 1MF		16V
C311	1-164-346-11	CERAMIC CHIP 1MF		16V
C312	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C313	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C315	1-216-295-00	CONDUCTOR, CHIP	(2012)	
C317	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C319	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C320	1-126-965-11	ELECT 22MF	20%	50V
C321	1-163-021-71	CERAMIC CHIP 0.01MF	10%	50V
C322	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C323	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C324	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C325	1-164-346-11	CERAMIC CHIP 1MF		16V
C326	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C327	1-137-374-11	FILM 0.047MF	5%	50V
C328	1-126-964-11	ELECT 10MF	20%	50V
C329	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C330	1-137-132-91	FILM 0.1MF	5%	63V
C331	1-137-581-11	FILM 0.1MF	5%	100V
C332	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C333	1-126-933-11	ELECT 100MF	20%	16V
C334	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C335	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C336	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C337	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C338	1-164-346-11	CERAMIC CHIP 1MF		16V
C339	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C340	1-126-933-11	ELECT 100MF	20%	16V
C341	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C342	1-164-346-11	CERAMIC CHIP 1MF		16V
C343	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C344	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C347	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C348	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C350	1-126-964-11	ELECT 10MF	20%	50V
C351	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C352	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C353	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C354	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C355	1-126-965-11	ELECT 22MF	20%	50V
C356	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C357	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C358	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C359	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C360	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C370	1-164-505-11	CERAMIC CHIP 2.2MF		16V
		(KV-28WF1B/28WF1D/28WF1E/28WF1K/28WF1R)		
C371	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C372	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
		(KV-28WF1B/28WF1D/28WF1E/28WF1K/28WF1R)		
C373	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
		(KV-28WF1B/28WF1D/28WF1E/28WF1K/28WF1R)		
		< FILTER >		
CF120	1-409-327-00	TRAP, CERAMIC (6.5MHZ)		
		(KV-28WF1A/28WF1B/28WF1D/28WF1E)		
		< CONNECTOR >		
CN1	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P		
CN2	*1-564-508-11	PLUG, CONNECTOR 5P		
CN4	1-568-878-51	PIN, CONNECTOR 3P		
CN201	1-766-296-11	CONNECTOR, DUAL SCART		
CN301	*1-568-882-51	PIN, CONNECTOR 7P		
		< DIODE >		
D2	8-719-988-62	DIODE 1SS355		
D12	8-719-158-15	DIODE RD5.6S-B		
D14	8-719-158-15	DIODE RD5.6S-B		
D15	8-719-158-15	DIODE RD5.6S-B		
D101	8-719-977-81	DIODE DTZ33B		
D201	8-719-977-22	DIODE DTZ9.1		
D202	8-719-977-22	DIODE DTZ9.1		
D203	8-719-977-22	DIODE DTZ9.1		
D204	8-719-977-22	DIODE DTZ9.1		
D205	8-719-977-22	DIODE DTZ9.1		
D206	8-719-977-22	DIODE DTZ9.1		
D207	8-719-977-22	DIODE DTZ9.1		
D208	8-719-977-22	DIODE DTZ9.1		
D209	8-719-977-22	DIODE DTZ9.1		
D210	8-719-977-22	DIODE DTZ9.1		
D211	8-719-977-22	DIODE DTZ9.1		
D212	8-719-977-22	DIODE DTZ9.1		
D213	8-719-977-22	DIODE DTZ9.1		
D214	8-719-977-22	DIODE DTZ9.1		

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D215	8-719-977-22	DIODE DTZ9.1	
D216	8-719-158-15	DIODE RD5.6S-B	
D217	8-719-158-15	DIODE RD5.6S-B	
D218	8-719-158-15	DIODE RD5.6S-B	
D220	8-719-988-62	DIODE 1SS355	
D221	8-719-988-62	DIODE 1SS355	
D222	8-719-977-22	DIODE DTZ9.1	
D223	8-719-977-22	DIODE DTZ9.1	
D224	8-719-977-22	DIODE DTZ9.1	
D225	8-719-977-22	DIODE DTZ9.1	
D226	8-719-977-22	DIODE DTZ9.1	
D227	8-719-977-13	DIODE DTZ6.8C	
D229	8-719-977-22	DIODE DTZ9.1	
D230	8-719-977-22	DIODE DTZ9.1	
D251	8-719-047-16	DIODE BAS216	
D252	8-719-158-15	DIODE RD5.6S-B	
D253	8-719-158-15	DIODE RD5.6S-B	
D302	8-719-988-62	DIODE 1SS355	
D320	8-719-977-22	DIODE DTZ9.1	
D370	8-719-047-16	DIODE BAS216	
		< ENCAPSULATED FILTER >	
FL101	1-236-071-11	ENCAPSULATED COMPONENT	
FL201	1-236-071-11	ENCAPSULATED COMPONENT	
FL202	1-236-071-11	ENCAPSULATED COMPONENT	
FL203	1-236-071-11	ENCAPSULATED COMPONENT	
		< IC >	
IC1	8-759-376-75	IC SDA5250M-C5-GEG	
IC2	8-759-334-20	IC ST24E32M6TR	
IC3	8-759-167-62	IC TMS27PC010A-15FML	(KV-28WF1B/28WF1D/28WF1E/28WF1U)
	8-759-452-96	IC TMS27PC010A-15FMBE606	(KV-28WF1A/28WF1K/28WF1R)
IC4	8-759-394-57	IC PST593C-MMP-4P	
IC201	8-752-081-26	IC CXA2040AQ-T4	
IC202	8-759-376-56	IC MSP3400C-PS-C6-T	(KV-28WF1A/28WF1D/28WF1K/28WF1R)
	8-759-376-80	IC MSP3410B-PS-F7-T	(KV-28WF1B/28WF1E/28WF1U)
IC203	8-759-385-76	IC MC14052BDR2	
IC301	8-752-081-43	IC CXA2076Q-TL	
IC302	8-759-288-85	IC TDA4665T-T	
IC303	8-759-430-79	IC TDA8395T/N3	(KV-28WF1B/28WF1D/28WF1E/28WF1K/28WF1R)
		< COIL >	
L10	1-410-379-41	INDUCTOR 6.8UH	
L102	1-408-406-00	INDUCTOR 5.6UH	(KV-28WF1A/28WF1B/28WF1D/28WF1E)
L111	1-410-993-11	INDUCTOR CHIP 1UH	
L120	1-408-408-00	INDUCTOR 8.2UH	
L121	1-408-397-00	INDUCTOR 1UH	
L122	1-408-408-00	INDUCTOR 8.2UH	
L300	1-408-607-31	INDUCTOR 22UH	
		< TRANSISTOR >	
Q1	8-729-620-06	TRANSISTOR 2SC23052-EF	
Q4	8-729-620-06	TRANSISTOR 2SC23052-EF	
Q10	8-729-216-22	TRANSISTOR 2SA1162-G	
Q11	8-729-216-22	TRANSISTOR 2SA1162-G	
Q12	8-729-216-22	TRANSISTOR 2SA1162-G	
Q15	8-729-216-22	TRANSISTOR 2SA1162-G	
Q17	8-729-216-22	TRANSISTOR 2SA1162-G	
Q80	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q81	8-729-216-22	TRANSISTOR 2SA1162-G	
Q82	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q110	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q111	8-729-216-22	TRANSISTOR 2SA1162-G	
Q112	8-729-620-06	TRANSISTOR 2SC3051-EF	
Q120	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q121	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-28WF1A/28WF1B/28WF1D/28WF1E)
Q122	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q124	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-28WF1A/28WF1B/28WF1D/28WF1E)
Q130	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-28WF1A/28WF1B/28WF1D/28WF1E)
Q201	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q202	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q203	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q204	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q205	1-801-806-11	TRANSISTOR DTC144EA	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q207	8-729-216-22	TRANSISTOR 2SA1162-G	
Q208	8-729-216-22	TRANSISTOR 2SA1162-G	
Q209	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q210	1-801-806-11	TRANSISTOR DTC144EKA	
Q300	1-801-806-11	TRANSISTOR DTC144EKA	
Q304	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q305	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q306	1-801-806-11	TRANSISTOR DTC144EA	
Q330	8-729-216-22	TRANSISTOR 2SA1162-G	
Q331	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q332	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1002	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >	
JR101	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR102	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR201	1-216-295-00	CONDUCTOR, CHIP (2012)	
R1	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R3	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R4	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R5	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R7	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R9	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R10	1-216-041-91	METAL GLAZE 470 5% 1/10W	
R11	1-216-041-91	METAL GLAZE 470 5% 1/10W	
R12	1-216-041-91	METAL GLAZE 470 5% 1/10W	
R13	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R14	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R15	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R16	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R17	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R18	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R19	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R20	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R21	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R24	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R25	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R28	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R29	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R30	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R31	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R33	1-216-025-00	METAL GLAZE	100	5%	1/10W
R34	1-216-025-00	METAL GLAZE	100	5%	1/10W
R35	1-216-025-00	METAL GLAZE	100	5%	1/10W
R36	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R37	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R38	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R39	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R40	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R41	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R42	1-216-069-91	METAL GLAZE	6.8K	5%	1/10W
R44	1-216-069-91	METAL GLAZE	6.8K	5%	1/10W
R46	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R47	1-216-041-00	METAL GLAZE	470	5%	1/10W
R48	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R49	1-216-025-00	METAL GLAZE	100	5%	1/10W
R50	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R51	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R52	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R53	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R54	1-216-025-00	METAL GLAZE	100	5%	1/10W
R58	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R59	1-216-025-00	METAL GLAZE	100	5%	1/10W
R60	1-216-025-00	METAL GLAZE	100	5%	1/10W
R61	1-216-025-00	METAL GLAZE	100	5%	1/10W
R62	1-216-025-00	METAL GLAZE	100	5%	1/10W
R63	1-216-025-00	METAL GLAZE	100	5%	1/10W
R64	1-216-025-00	METAL GLAZE	100	5%	1/10W
R65	1-216-025-00	METAL GLAZE	100	5%	1/10W
R66	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R67	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R68	1-216-025-00	METAL GLAZE	100	5%	1/10W
R69	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R70	1-216-025-00	METAL GLAZE	100	5%	1/10W
R71	1-216-025-00	METAL GLAZE	100	5%	1/10W
R72	1-216-025-00	METAL GLAZE	100	5%	1/10W
R73	1-216-025-00	METAL GLAZE	100	5%	1/10W
R74	1-216-025-00	METAL GLAZE	100	5%	1/10W
R75	1-216-025-00	METAL GLAZE	100	5%	1/10W
R76	1-216-025-00	METAL GLAZE	100	5%	1/10W
R77	1-216-025-00	METAL GLAZE	100	5%	1/10W
R78	1-216-025-00	METAL GLAZE	100	5%	1/10W
R79	1-216-033-00	METAL GLAZE	220	5%	1/10W
R80	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R81	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R82	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R83	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R84	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R85	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R86	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R87	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R88	1-216-025-00	METAL GLAZE	100	5%	1/10W
R89	1-216-025-00	METAL GLAZE	100	5%	1/10W
R91	1-216-025-00	METAL GLAZE	100	5%	1/10W
R92	1-216-025-00	METAL GLAZE	100	5%	1/10W
R93	1-216-033-00	METAL GLAZE	220	5%	1/10W
R94	1-216-033-00	METAL GLAZE	220	5%	1/10W
R95	1-216-033-00	METAL GLAZE	220	5%	1/10W
R99	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R101	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R102	1-216-025-00	METAL GLAZE	100	5%	1/10W
R103	1-216-025-00	METAL GLAZE	100	5%	1/10W
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R105	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R106	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R107	1-216-295-00	CONDUCTOR, CHIP			(2012)
R110	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R111	1-216-029-00	METAL GLAZE	150	5%	1/10W
R112	1-216-029-00	METAL GLAZE	150	5%	1/10W
R113	1-216-001-00	METAL GLAZE	10	5%	1/10W
R114	1-216-029-00	METAL GLAZE	150	5%	1/10W
R115	1-216-037-00	METAL GLAZE	330	5%	1/10W
R119	1-216-295-00	CONDUCTOR, CHIP			(2012)
R120	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R121	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R122	1-216-041-00	METAL GLAZE	470	5%	1/10W
R123	1-216-031-00	METAL GLAZE	180	5%	1/10W
R124	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R125	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R126	1-216-025-00	METAL GLAZE	100	5%	1/10W
R127	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R128	1-216-035-00	METAL GLAZE	270	5%	1/10W
R129	1-216-037-00	METAL GLAZE	330	5%	1/10W
R130	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R131	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R132	1-216-025-00	METAL GLAZE	100	5%	1/10W
R133	1-216-041-00	METAL GLAZE	470	5%	1/10W
R134	1-216-001-00	METAL GLAZE	10	5%	1/10W
R135	1-216-037-00	METAL GLAZE	330	5%	1/10W
			(KV-28WF1A/28WF1B/28WF1D/28WF1E)		
	1-216-045-00	METAL GLAZE	680	5%	1/10W
			(KV-28WF1K/28WF1R/28WF1U)		
R136	1-216-033-00	METAL GLAZE	220	5%	1/10W
R137	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R138	1-216-041-00	METAL GLAZE	470	5%	1/10W
R200	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R201	1-216-033-00	METAL GLAZE	220	5%	1/10W
R202	1-216-033-00	METAL GLAZE	220	5%	1/10W
R203	1-216-025-00	METAL GLAZE	100	5%	1/10W
R204	1-216-025-00	METAL GLAZE	100	5%	1/10W
R205	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R206	1-216-033-00	METAL GLAZE	220	5%	1/10W
R208	1-216-041-00	METAL GLAZE	470	5%	1/10W
R209	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R210	1-216-017-91	METAL GLAZE	47	5%	1/10W
R211	1-216-033-00	METAL GLAZE	220	5%	1/10W
R212	1-216-022-00	METAL GLAZE	75	5%	1/10W
R213	1-216-022-00	METAL GLAZE	75	5%	1/10W
R214	1-216-025-00	METAL GLAZE	100	5%	1/10W
R216	1-216-025-00	METAL GLAZE	100	5%	1/10W
R217	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R218	1-216-025-00	METAL GLAZE	100	5%	1/10W
R219	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R220	1-216-295-00	CONDUCTOR, CHIP			(2012)
R221	1-216-039-00	METAL GLAZE	390	5%	1/10W
R222	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R223	1-216-295-00	CONDUCTOR, CHIP			(2012)
R224	1-216-039-00	METAL GLAZE	390	5%	1/10W
R225	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R226	1-216-033-00	METAL GLAZE	220	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R227	1-216-022-00	METAL GLAZE	75	5%	1/10W
R228	1-216-022-00	METAL GLAZE	75	5%	1/10W
R229	1-216-033-00	METAL GLAZE	220	5%	1/10W
R230	1-216-022-00	METAL GLAZE	75	5%	1/10W
R232	1-216-025-00	METAL GLAZE	100	5%	1/10W
R233	1-216-025-00	METAL GLAZE	100	5%	1/10W
R234	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R235	1-216-025-00	METAL GLAZE	100	5%	1/10W
R236	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R237	1-216-295-00	CONDUCTOR, CHIP			(2012)
R238	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R239	1-216-039-00	METAL GLAZE	390	5%	1/10W
R240	1-216-295-00	CONDUCTOR, CHIP			(2012)
R241	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R242	1-216-039-00	METAL GLAZE	390	5%	1/10W
R243	1-216-033-00	METAL GLAZE	220	5%	1/10W
R244	1-216-033-00	METAL GLAZE	220	5%	1/10W
R245	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R246	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R247	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R249	1-216-001-00	METAL GLAZE	10	5%	1/10W
R255	1-216-025-00	METAL GLAZE	100	5%	1/10W
R256	1-216-025-00	METAL GLAZE	100	5%	1/10W
R260	1-216-198-91	METAL GLAZE	1K	5%	1/8W
R261	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R262	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R263	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R265	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R270	1-216-022-00	METAL GLAZE	75	5%	1/10W
R271	1-216-022-00	METAL GLAZE	75	5%	1/10W
R272	1-216-022-00	METAL GLAZE	75	5%	1/10W
R273	1-216-022-00	METAL GLAZE	75	5%	1/10W
R280	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R281	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R282	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R283	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R284	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R285	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R286	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R287	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R288	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R289	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R290	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R291	1-216-025-71	METAL GLAZE	100	5%	1/10W
R292	1-216-025-71	METAL GLAZE	100	5%	1/10W
R293	1-216-025-71	METAL GLAZE	100	5%	1/10W
R294	1-216-025-71	METAL GLAZE	100	5%	1/10W
R295	1-216-025-71	METAL GLAZE	100	5%	1/10W
R296	1-216-025-71	METAL GLAZE	100	5%	1/10W
R300	1-216-025-00	METAL GLAZE	100	5%	1/10W
R301	1-216-033-00	METAL GLAZE	220	5%	1/10W
R302	1-216-295-00	CONDUCTOR, CHIP			(2012)
R303	1-216-295-00	CONDUCTOR, CHIP			(2012)
R308	1-216-025-00	METAL GLAZE	100	5%	1/10W
R309	1-216-033-00	METAL GLAZE	220	5%	1/10W
R310	1-216-033-00	METAL GLAZE	220	5%	1/10W
R311	1-216-295-00	CONDUCTOR, CHIP			(2012)
R312	1-216-295-00	CONDUCTOR, CHIP			(2012)
R314	1-216-295-00	CONDUCTOR, CHIP			(2012)
R315	1-216-295-00	CONDUCTOR, CHIP			(2012)

REF.NO.	PART NO.	DESCRIPTION			REMARK
R316	1-216-033-00	METAL GLAZE	220	5%	1/10W
R318	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R319	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R320	1-216-025-00	METAL GLAZE	100	5%	1/10W
R321	1-216-025-00	METAL GLAZE	100	5%	1/10W
R322	1-216-025-00	METAL GLAZE	100	5%	1/10W
R323	1-216-033-00	METAL GLAZE	220	5%	1/10W
R324	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R326	1-216-025-00	METAL GLAZE	100	5%	1/10W
R327	1-216-025-00	METAL GLAZE	100	5%	1/10W
R328	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R329	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R330	1-216-025-00	METAL GLAZE	100	5%	1/10W
R331	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R332	1-216-025-00	METAL GLAZE	100	5%	1/10W
R333	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R334	1-216-041-00	METAL GLAZE	470	5%	1/10W
R335	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R336	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R337	1-216-025-00	METAL GLAZE	100	5%	1/10W
R338	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R339	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R340	1-216-025-00	METAL GLAZE	100	5%	1/10W
R341	1-216-025-00	METAL GLAZE	100	5%	1/10W
R342	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R343	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R344	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R345	1-216-025-00	METAL GLAZE	100	5%	1/10W
R346	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R347	1-216-025-00	METAL GLAZE	100	5%	1/10W
R348	1-216-025-00	METAL GLAZE	100	5%	1/10W
R349	1-216-025-00	METAL GLAZE	100	5%	1/10W
R350	1-216-042-00	METAL GLAZE	510	5%	1/10W
R351	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R352	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R353	1-216-033-00	METAL GLAZE	220	5%	1/10W
R354	1-216-295-00	CONDUCTOR, CHIP			(2012)
R357	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R358	1-216-295-00	CONDUCTOR, CHIP			(2012)
R359	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R370	1-216-295-00	CONDUCTOR, CHIP			(2012)

< TUNER >

TU101	1-693-338-11	(TUVIF) (AEP) (KV-28WF1A/28WF1D/28WF1E/28WF1K/28WF1R)	
	1-693-340-11	(TUVIF) (FR)	(KV-28WF1B)
	1-693-339-11	(TUVIF) (UK)	(KV-28WF1U)

< CRYSTAL >

X1	1-767-120-21	VIBRATOR, CERAMIC
X201	1-760-628-11	VIBRATOR, CRYSTAL
X301	1-567-504-11	OSCILLATOR, CRYSTAL
X302	1-567-505-11	OSCILLATOR, CRYSTAL
X303	1-767-127-11	VIBRATOR, CERAMIC

IF (KV-28WFA/28WFD/28WF1E/28WFK/28WFR/28WF1U)

IF (KV-28WFB)

REF.NO.	PART NO.	DESCRIPTION			REMARK
	A-1652-037-A	IF BOARD, COMPLETE **********			(KV-28WF1A/28WF1D/28WF1E/28WF1K/28WFR)
	A-1652-038-A	IF BOARD, COMPLETE **********			(KV-28WF1U)
		< CAPACITOR >			
C01	1-164-337-11	CERAMIC CHIP 2.2MF			16V
C02	1-164-337-11	CERAMIC CHIP 2.2MF			16V
C03	1-104-957-11	ELECT 47MF		20%	16V
C04	1-135-259-11	TANTAL. CHIP 10MF		20%	6.3V
C05	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C06	1-164-005-11	CERAMIC CHIP 0.47MF			16V
C08	1-164-232-11	CERAMIC CHIP 0.01MF		10%	50V
C09	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C10	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C11	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C15	1-124-282-00	ELECT 22MF		20%	25V
C16	1-162-638-11	CERAMIC CHIP 1MF			16V
C18	1-164-337-11	CERAMIC CHIP 2.2MF			16V
C19	1-124-937-11	ELECT 10MF		20%	16V
		< FILTER >			
CF01	1-404-134-00	TRAP, CERAMIC (5.5MHZ)			(KV-28WF1A/28WF1D/28WF1E/28WF1K/28WF1R)
	1-409-333-21	TRAP, CERAMIC (6.0MHZ)			(KV-28WF1U)
SWF04	1-767-084-11	FILTER, SURFACE WAVE			
		< IC >			
IC01	8-759-385-26	IC TDA4472-CFLG3			
		< COIL >			
L02	1-408-408-00	INDUCTOR 8.2UH			
L04	1-408-419-00	INDUCTOR 68UH			
L08	1-410-992-11	INDUCTOR CHIP 0.82UH			
		< VARIABLE COIL >			
LV01	1-411-874-11	COIL			
		< TRANSISTOR >			
Q01	8-729-216-22	TRANSISTOR 2SA1162-G			
		< RESISTOR >			
JR01	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR02	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR03	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR04	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR05	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR07	1-216-295-00	METAL GLAZE	0	5%	1/10W
R01	1-216-029-00	METAL GLAZE	150	5%	1/10W
R02	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R03	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R04	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R05	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R06	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R07	1-216-025-91	METAL GLAZE	100	5%	1/10W
R08	1-216-174-00	METAL GLAZE	100	5%	1/8W
R09	1-216-045-00	METAL GLAZE	680	5%	1/10W (KV-28WF1A/28WF1D/28WF1E/28WX1K/28WF1R)
	1-216-049-91	METAL GLAZE	1K	5%	1/10W (KV-28WF1U)
R10	1-216-041-00	METAL GLAZE	470	5%	1/10W
R11	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R23	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R24	1-216-295-91	METAL GLAZE	0	5%	1/10W
R25	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R021	1-216-174-00	METAL GLAZE	100	5%	1/8W
		< VARIABLE RESISTOR >			
RV01	1-226-703-11	RES, ADJ, METAL GLAZE 10K			

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	A-1652-036-A	IF BOARD, COMPLETE (KV-28WF1B) **********			
		< CAPACITOR >			
C01	1-162-638-11	CERAMIC CHIP 1MF			16V
C02	1-164-337-11	CERAMIC CHIP 2.2MF			16V
C03	1-104-957-11	ELECT 47MF		20%	16V
C04	1-135-259-11	TANTAL. CHIP 10MF		20%	6.3V
C05	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C06	1-164-005-11	CERAMIC CHIP 0.47MF			16V
C08	1-164-232-11	CERAMIC CHIP 0.01MF		10%	50V
C09	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C10	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C11	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C12	1-164-232-11	CERAMIC CHIP 0.01MF		10%	50V
C13	1-164-232-11	CERAMIC CHIP 0.01MF		10%	50V
C14	1-164-232-11	CERAMIC CHIP 0.01MF		10%	50V
C15	1-104-957-11	ELECT 47MF		20%	16V
C16	1-162-638-11	CERAMIC CHIP 1MF			16V
C17	1-163-243-11	CERAMIC CHIP 47PF		5%	50V
C18	1-164-337-11	CERAMIC CHIP 2.2MF			16V
C20	1-124-937-11	ELECT 10MF		20%	16V
C21	1-164-506-11	CERAMIC CHIP 4.7MF			16V
		< FILTER >			
CF01	1-409-430-11	TRAP, CERAMIC			
SWF01	1-579-273-11	FILTER, SURFACE WAVE			
SWF02	1-760-329-11	FILTER, SURFACE WAVE			
SWF03	1-767-083-11	FILTER, SURFACE WAVE			
		< TRIMMER >			
CT01	1-760-662-11	TRAP, CERAMIC			
		< IC >			
IC01	8-759-069-36	IC MC74HC4046AF			
		< COIL >			
L02	1-408-406-00	INDUCTOR 5.6UH			
L04	1-408-419-00	INDUCTOR 68UH			
L05	1-410-987-11	INDUCTOR CHIP 0.33UH			
L06	1-408-399-00	INDUCTOR 1.5UH			
		< VARIABLE COIL >			
LV01	1-411-874-11	COIL			

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Ne les remplacer que par une piece portant le numero specifie.

IF(KV-28WF1B) C

REF.NO.	PART NO.	DESCRIPTION	REMARK

< TRANSISTOR >

Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
Q02	8-729-035-11	TRANSISTOR BF799-GEG	
Q03	8-729-035-11	TRANSISTOR BF799-GEG	
Q04	8-729-901-01	TRANSISTOR DTC144EK	

< RESISTOR >

JR01	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR02	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR03	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR04	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR05	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR07	1-216-295-00	METAL GLAZE	0	5%	1/10W
R01	1-216-029-00	METAL GLAZE	150	5%	1/10W
R02	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R03	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R04	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R05	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R06	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R07	1-216-025-91	METAL GLAZE	100	5%	1/10W
R08	1-216-174-00	METAL GLAZE	100	5%	1/8W
R09	1-216-045-00	METAL GLAZE	680	5%	1/10W
R10	1-216-041-00	METAL GLAZE	470	5%	1/10W
R11	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R12	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R13	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R14	1-216-023-00	METAL GLAZE	82	5%	1/10W
R15	1-216-017-91	METAL GLAZE	47	5%	1/10W
R16	1-216-033-00	METAL GLAZE	220	5%	1/10W
R17	1-216-017-91	METAL GLAZE	47	5%	1/10W
R18	1-216-013-00	METAL GLAZE	33	5%	1/10W
R20	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R23	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R25	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R21	1-216-174-00	METAL GLAZE	100	5%	1/8W

< VARIABLE RESISTOR >

RV01	1-226-703-11	RES, ADJ, METAL GLAZE	10K
RV02	1-226-703-11	RES, ADJ, METAL GLAZE	10K

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*A-1638-081-A C BOARD, COMPLETE
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< CAPACITOR >

C702	1-102-115-00	CERAMIC	560PF	10%	50V
C703	1-102-116-00	CERAMIC	680PF	10%	50V
C708	1-162-114-00	CERAMIC	0.0047MF		2KV
C710	1-107-652-11	ELECT	10MF	20%	250V
C712	1-102-116-00	CERAMIC	680PF	10%	50V
C714	1-126-967-11	ELECT	47MF	20%	16V
C717	1-102-114-00	CERAMIC	470PF	10%	50V
C718	1-102-114-00	CERAMIC	470PF	10%	50V
C719	1-102-114-00	CERAMIC	470PF	10%	50V
C722	1-101-880-00	CERAMIC	47PF	5%	50V
C723	1-101-880-00	CERAMIC	47PF	5%	50V
C724	1-101-880-00	CERAMIC	47PF	5%	50V

< CONNECTOR >

CN701	1-778-037-11	PIN, CONNECTOR 6P	
CN702	1-695-915-11	TAB (CONTACT)	
CN703	*1-568-882-51	PIN, CONNECTOR 7P	

< DIODE >

D701	8-719-109-72	DIODE RD3.9ES-B2	
D702	8-719-991-33	DIODE 1SS133T-77	
D703	1-535-456-11	LEAD JUMPER (5.0MM)	
D704	1-535-456-11	LEAD JUMPER (5.0MM)	
D705	1-535-456-11	LEAD JUMPER (5.0MM)	
D706	8-719-991-33	DIODE 1SS133T-77	
D707	8-719-991-33	DIODE 1SS133T-77	
D708	8-719-991-33	DIODE 1SS133T-77	
D709	8-719-991-33	DIODE 1SS133T-77	
D710	8-719-991-33	DIODE 1SS133T-77	
D711	8-719-302-43	DIODE ELIZ	
D713	1-535-465-11	LEAD, JUMPER (5.0MM)	
D714	8-719-991-33	DIODE 1SS133T-77	
D715	8-719-991-33	DIODE 1SS133T-77	
D716	8-719-991-33	DIODE 1SS133T-77	
D717	8-719-991-33	DIODE 1SS133T-77	
D718	8-719-991-33	DIODE 1SS133T-77	
D719	8-719-991-33	DIODE 1SS133T-77	
D720	8-719-991-33	DIODE 1SS133T-77	

< CRT SOCKET >

J701	⚠	1-526-990-21	SOCKET, CRT	

< COIL >

L704	1-408-609-41	INDUCTOR	33UH

< TRANSISTOR >

Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-906-70	TRANSISTOR BF871-127	
Q704	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q706	8-729-906-70	TRANSISTOR BF871-127	
Q707	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q709	8-729-906-70	TRANSISTOR BF871-127	
Q710	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q711	8-729-026-41	TRANSISTOR 2SA933AS-QRT	

< RESISTOR >

R704	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R705	1-260-103-11	CARBON	2.2K	5%	1/2W	
R706	1-247-815-91	CARBON	220	5%	1/4W	
R707	1-249-408-11	CARBON	180	5%	1/4W	
R708	1-535-143-11	LEAD, JUMPER (10.0MM)				
R709	1-202-844-00	SOLID	330K	10%	1/2W	
R711	1-247-843-11	CARBON	3.3K	5%	1/4W	
R712	1-260-103-11	CARBON	2.2K	5%	1/2W	
R714	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R715	1-249-417-11	CARBON	1K	5%	1/4W	
R716	1-247-815-91	CARBON	220	5%	1/4W	
R717	1-249-408-11	CARBON	180	5%	1/4W	
R718	1-202-814-11	SOLID	33K	10%	1/2W	
R719	1-535-143-11	LEAD, JUMPER (10.0MM)				
R720	1-247-843-11	CARBON	3.3K	5%	1/4W	

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C D2 D3 D

REF.NO.	PART NO.	DESCRIPTION				REMARK
R722	1-202-848-00	SOLID	680K	10%	1/2W	
R723	1-249-417-11	CARBON	1K	5%	1/4W	
R724	1-202-846-00	SOLID	470K	10%	1/2W	
R726	1-260-103-11	CARBON	2.2K	5%	1/2W	
R727	1-247-815-91	CARBON	220	5%	1/4W	
R728	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R729	1-249-408-11	CARBON	180	5%	1/4W	
R730	1-535-143-11	LEAD, JUMPER	(10.0MM)			
R731	1-247-843-11	CARBON	3.3K	5%	1/4W	
R733	1-249-420-11	CARBON	1.8K	5%	1/4W	
R734	1-247-807-31	CARBON	100	5%	1/4W	
R735	1-249-420-11	CARBON	1.8K	5%	1/4W	
R736	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R739	1-249-417-11	CARBON	1K	5%	1/4W	
R740	1-249-420-11	CARBON	1.8K	5%	1/4W	
R741	1-202-549-00	SOLID	100	20%	1/2W	
R744	1-249-421-11	CARBON	2.2K	5%	1/4W	
R745	1-249-421-11	CARBON	2.2K	5%	1/4W	
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	
R747	1-249-437-11	CARBON	47K	5%	1/4W	
R748	1-249-417-11	CARBON	1K	5%	1/4W	
R749	1-249-435-11	CARBON	33K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M				
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M				

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*A-1640-214-A D2 BOARD, COMPLETE
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< CAPACITOR >

C1801	1-126-967-11	ELECT	47MF	20%	50V
C1803	1-137-368-11	FILM	0.0047MF	5%	50V
C1804	1-126-964-11	ELECT	10MF	20%	50V
C1807	1-137-366-11	FILM	0.0022MF	5%	50V

< CONNECTOR >

CN1801	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P
CN1803	*1-568-878-51	PIN, CONNECTOR 3P

< DIODE >

D1802	8-719-110-17	DIODE RD10ESB2

< IC >

IC1801	8-759-701-59	IC NJM78M09FA
IC1802	8-759-603-37	IC M5216P

< IC LINK >

JW1802	⚠	1-532-605-00	LINK, IC			

< RESISTOR >

R1807		1-247-883-00	CARBON	150K	5%	1/4W
R1809		1-249-429-11	CARBON	10K	5%	1/4W
R1810		1-249-429-11	CARBON	10K	5%	1/4W
R1811		1-249-429-11	CARBON	10K	5%	1/4W
R1812		1-249-429-11	CARBON	10K	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1640-235-A	D3 BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C2802	1-126-965-11	ELECT	22MF	20%	50V	
		< CONNECTOR >				
CN2801	1-568-878-51	PIN, CONNECTOR 3P				
CN2802	*1-580-798-11	CONNECTOR PIN (DY) 6P				
CN2803	*1-580-798-11	CONNECTOR PIN (DY) 6P				
		< DIODE >				
D2801	8-719-991-33	DIODE 1SS133T-77				
		< TRANSISTOR >				
Q2801	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		< RESISTOR >				
R2801	1-249-421-11	CARBON	2.2K	5%	1/4W	
		< RELAY >				
RY2801	1-755-172-11	RELAY				
		< COIL >				
T2801	1-411-981-11	COIL, CHOKE 245UH				

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*A-1642-208-A D BOARD, COMPLETE
****

4-201-023-11 SPACER, INSULATING

4-202-373-01 SPRING, IC

< CAPACITOR >

C502		1-102-824-00	CERAMIC	470PF	5%	50V
C503		1-136-165-00	FILM	0.1MF	5%	50V
C504		1-102-824-00	CERAMIC	470PF	5%	50V
C506		1-126-941-11	ELECT	470MF	20%	25V
C507		1-109-953-11	ELECT	2.2MF	20%	50V
C509		1-136-165-00	FILM	0.1MF	5%	50V
C510		1-126-969-11	ELECT	220MF	20%	50V
C511		1-136-202-11	FILM	0.33MF	5%	63V
C513		1-106-220-00	MYLAR	0.1MF	10%	100V
C514		1-136-165-00	FILM	0.1MF	5%	50V
C515		1-126-941-11	ELECT	470MF	20%	25V
C517		1-126-941-11	ELECT	470MF	20%	25V
C518		1-102-228-00	CERAMIC	470PF	10%	500V
C519		1-102-228-00	CERAMIC	470PF	10%	500V
C520		1-126-941-11	ELECT	470MF	20%	25V
C521		1-107-698-11	ELECT	10MF	20%	25V
C522		1-126-964-11	ELECT	10MF	20%	50V
C523		1-136-165-00	FILM	0.1MF	5%	50V
C600	⚠	1-113-890-51	CERAMIC	0.0022MF	20%	250V
C601	⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C602	⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C603		1-125-555-11	ELECT	330MF	20%	400V
C604		1-126-968-11	ELECT	100MF	20%	50V
C605		1-107-929-11	ELECT	10MF	20%	100V
C606		1-162-318-11	CERAMIC	0.001MF	10%	500V

D

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REF.NO.		PART NO.	DESCRIPTION			REMARK
C607		1-104-666-11	ELECT	220MF	20%	25V
C608		1-109-880-11	FILM	0.0015MF	3%	2KV
C611		1-102-228-00	CERAMIC	470PF	10%	500V
C612		1-111-160-11	ELECT	22MF	20%	100V
C613		1-124-347-00	ELECT	100MF	20%	160V
C614		1-126-933-11	ELECT	100MF	20%	16V
C615		1-111-067-11	ELECT	0.001F	20%	25V
C616		1-111-067-11	ELECT	0.001F	20%	25V
C617		1-128-339-11	ELECT	2200MF	20%	16V
C618		1-136-165-00	FILM	0.1MF	5%	50V
C619		1-102-228-00	CERAMIC	470PF	10%	500V
C620		1-102-228-00	CERAMIC	470PF	10%	500V
C621		1-136-165-00	FILM	0.1MF	5%	50V
C622		1-107-925-11	ELECT	1MF	20%	100V
C623		1-104-666-11	ELECT	220MF	20%	25V
C624		1-136-165-00	FILM	0.1MF	5%	50V
C625		1-126-967-11	ELECT	47MF	20%	50V
C626		1-104-666-11	ELECT	220MF	20%	25V
C628		1-126-964-11	ELECT	10MF	20%	50V
C629		1-111-097-11	ELECT	0.0022F	20%	35V
C630		1-111-097-11	ELECT	0.0022F	20%	35V
C631		1-126-965-11	ELECT	22MF	20%	50V
C632		1-104-666-11	ELECT	220MF	20%	25V
C633	⚠	1-107-563-11	FILM	0.1MF	20%	300V
C635	⚠	1-107-563-11	FILM	0.1MF	20%	300V
C636	⚠	1-113-890-51	CERAMIC	0.0022MF	20%	250V
C638		1-136-203-11	FILM	0.01MF	10%	250V
C640		1-106-220-00	MYLAR	0.1MF	10%	100V
C641		1-161-744-00	CERAMIC	0.01MF		400V
C644		1-136-559-11	MYLAR	0.0047MF	10%	400V
C647		1-162-116-00	CERAMIC	680PF	10%	2KV
C651		1-102-228-00	CERAMIC	470PF	10%	500V
C800		1-137-368-11	FILM	0.0047MF	5%	50V
C801		1-137-368-11	FILM	0.0047MF	5%	50V
C802		1-102-074-00	CERAMIC	0.001MF	10%	50V
C804		1-136-165-00	FILM	0.1MF	5%	50V
C805		1-136-207-11	FILM	0.047MF	10%	250V
C806		1-104-999-11	MYLAR	0.1MF	10%	200V
C807		1-136-109-00	FILM	0.68MF	5%	200V
C808		1-136-104-00	FILM	0.16MF	5%	200V
C810		1-107-683-11	ELECT	2.2MF	0	250V
C811		1-102-212-00	CERAMIC	820PF	10%	500V
C812		1-136-540-11	FILM	0.82MF	5%	200V
C813		1-129-722-00	FILM	0.047MF	10%	630V
C814		1-136-084-00	FILM	0.0145MF	3%	2KV
C815		1-137-047-11	FILM	0.01MF	10%	400V
C816		1-162-134-11	CERAMIC	470PF	10%	2KV
C817		1-162-116-00	CERAMIC	680PF	10%	2KV
C819		1-136-208-11	FILM	0.068MF	10%	250V
C820		1-102-114-00	CERAMIC	470PF	10%	50V
C821		1-162-114-00	CERAMIC	0.0047MF		2KV
C822		1-107-662-11	ELECT	22MF	20%	250V
C824		1-123-024-21	ELECT	33MF		160V
C829		1-126-959-11	ELECT	0.47MF	20%	50V
C830		1-126-959-11	ELECT	0.47MF	20%	50V
C832		1-126-960-11	ELECT	1MF	20%	50V
C834		1-128-551-11	ELECT	22MF	20%	25V
C835		1-162-318-11	CERAMIC	0.001MF	10%	500V
C836		1-162-117-00	CERAMIC	100PF	10%	500V
C837		1-102-978-00	CERAMIC	220PF	5%	50V
C838		1-102-228-00	CERAMIC	470PF	10%	500V
C839		1-136-207-11	FILM	0.047MF	10%	250V
C841		1-102-110-00	CERAMIC	220PF	10%	50V
C845		1-101-880-00	CERAMIC	47PF	5%	50V
C901		1-101-810-00	CERAMIC	100PF	5%	500V
C902		1-137-372-11	FILM	0.022MF	5%	50V
C903		1-137-372-11	FILM	0.022MF	5%	50V
C904		1-126-933-11	ELECT	100MF	20%	16V
C905		1-126-964-11	ELECT	10MF	20%	50V
C906		1-126-964-11	ELECT	10MF	20%	50V
C907		1-126-964-11	ELECT	10MF	20%	50V
C908		1-126-964-11	ELECT	10MF	20%	50V
C910		1-535-465-11	LEAD, JUMPER (5.0MM)			
C911		1-126-964-11	ELECT	10MF	20%	50V
C913		1-101-810-00	CERAMIC	100PF	5%	500V
C916		1-137-040-11	FILM	0.0022MF	10%	400V
C1200		1-136-165-00	FILM	0.1MF	5%	50V
C1201		1-136-173-00	FILM	0.47MF	5%	50V
C1202		1-136-173-00	FILM	0.47MF	5%	50V
C1203		1-136-169-00	FILM	0.22MF	5%	50V
C1204		1-136-169-00	FILM	0.22MF	5%	50V
C1205		1-101-005-00	CERAMIC	0.022MF		50V
C1206		1-101-005-00	CERAMIC	0.022MF		50V
C1207		1-126-933-11	ELECT	100MF	20%	16V
C1208		1-126-963-11	ELECT	4.7MF	20%	50V
C1209		1-126-963-11	ELECT	4.7MF	20%	50V
C1212		1-137-372-91	CERAMIC	0.0221MF	10%	500V
C1213		1-162-318-11	CERAMIC	0.001MF	10%	500V
C1214		1-126-933-11	ELECT	100MF	20%	16V
C1215		1-136-173-00	FILM	0.47MF	5%	50V
C1216		1-137-366-11	FILM	0.0022MF	5%	50V
C1217		1-137-366-11	FILM	0.0022MF	5%	50V
C1218		1-126-941-11	ELECT	470MF	20%	25V

< CONNECTOR >

CN600	⚠	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P
CN601	⚠	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
CN603		*1-580-844-11	PIN, CONNECTOR (POWER)
CN800		*1-580-798-11	CONNECTOR PIN (DY) 6P
CN801		*1-573-296-21	CONNECTOR, BOARD TO BOARD 10P
CN803		1-695-915-11	TAB (CONTACT)
CN804		1-778-037-11	PIN, CONNECTOR 6P
CN807		1-568-878-51	PIN, CONNECTOR 3P
CN900		1-568-678-11	TERMINAL BLOCK, S 3P
CN902		1-695-299-11	CONNECTOR, BOARD TO BOARD 50P
CN1401		*1-568-880-51	PIN, CONNECTOR 5P
CN1408		*1-568-879-11	PIN, CONNECTOR 4P

< DIODE >

D500	8-719-109-85	DIODE RD5.IES-B2
D502	8-719-979-85	DIODE EGP20G
D503	8-719-979-85	DIODE EGP20G
D504	8-719-991-33	DIODE 1SS133T-77
D505	8-719-982-03	DIODE MTZJ-3.6A
D506	8-719-991-33	DIODE 1SS133T-77
D507	8-719-109-85	DIODE RD5.IES-B2
D510	8-719-924-13	DIODE MTZJ-T-77-22B
D600	8-719-510-53	DIODE D4SB60L
D601	8-719-046-77	DIODE EM1-V1
D603	8-719-109-97	DIODE RD6.8ES-B2

D

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REF.NO.		PART NO.	DESCRIPTION	REMARK
D604		8-719-046-75	DIODE EU-1-V1	
D605		8-719-302-43	DIODE ELIZ	
D606		8-719-302-43	DIODE ELIZ	
D607		8-719-046-78	DIODE EG-1Z-V1	
D608		8-719-302-06	DIODE EU2A	
D609		8-719-312-10	DIODE RU4AM-T3	
D610		8-719-046-74	DIODE AU-01Z-V1	
D611		8-719-058-38	DIODE FMN-G12S	
D612		8-719-046-76	DIODE RU3YX-LF-C4	
D613		8-719-058-38	DIODE FMN-G12S	
D614		8-719-058-38	DIODE FMN-G12S	
D615		8-719-046-75	DIODE EU-1-V1	
D616		8-719-110-03	DIODE RD7.5ES-B2	
D617		8-719-991-33	DIODE 1SS133T-77	
D618		8-719-991-33	DIODE 1SS133T-77	
D619		8-719-991-33	DIODE 1SS133T-77	
D620		8-719-991-33	DIODE 1SS133T-77	
D622		8-719-923-60	DIODE MTZJ-T-77-9.1	
D625		8-719-991-33	DIODE 1SS133T-77	
D626		8-719-046-74	DIODE AU-01Z-V1	
D631		8-719-109-93	DIODE RD6.2ES-B2	
D637		8-719-110-17	DIODE RD10ES-B2	
D800		8-719-991-33	DIODE 1SS133T-77	
D801		8-719-991-33	DIODE 1SS133T-77	
D802		8-719-991-33	DIODE 1SS133T-77	
D803		8-719-908-03	DIODE GP08D	
D807		8-719-302-43	DIODE ELIZ	
D808		8-719-908-03	DIODE GP08D	
D809		8-719-031-34	DIODE RGP02-20EG23	
D810		8-719-302-43	DIODE ELIZ	
D812		8-719-038-49	DIODE FMV-3FU-LF027-103	
D815		8-719-908-03	DIODE GP08D	
D817		8-719-109-85	DIODE RD5.IES-B2	
D901		8-719-302-45	DIODE SEL1210S-CD	
D902		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D903		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D904		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D905		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D906		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D907		8-719-109-89	DIODE RD5.6ES-B2	
D908		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D909		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D910		8-719-923-60	DIODE MTZJ-T-77-9.1A	
D1201		8-719-109-72	DIODE RD3.9ES-B2	
D1202		1-535-465-11	LEAD, JUMPER (5.0MM)	
			< FUSE >	
F601	⚠	1-576-232-11	FUSE (H.B.C.) 5.0A/250V	
		*1-533-725-11	HOLDER FUSE : F601	
			< FERRITE BEAD >	
FB600		1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB601		1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB602		1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB604		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB605		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB606		1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB607		1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB608		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB800		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	

REF.NO.		PART NO.	DESCRIPTION	REMARK
			< IC >	
IC500		8-759-192-71	IC STV9379	
IC600		8-749-010-84	IC STR-S6708	
IC601	⚠	8-749-013-21	IC TLP721(D4-G,T)	
IC602		8-749-920-61	IC SE135N	
IC603		8-759-144-82	UPC2405HF	
IC604		8-759-510-52	IC L4941BV	
IC606		8-759-267-25	IC LM2940T-9.0	
IC800		8-759-103-93	IC UPC393C	
IC900		8-742-014-10	IC SBX1981-51	
IC1200		8-759-250-68	IC TDA7264	
IC1201		8-759-502-21	IC TDA2822M	
			< JACK >	
J900		1-764-606-11	JACK	
J1200		1-770-218-11	JACK, PIN	
			< COIL >	
L502		1-412-519-11	INDUCTOR 3.3UH	
L503		1-412-519-11	INDUCTOR 3.3UH	
L609		1-412-533-21	INDUCTOR 47UH	
L610		1-535-465-11	LEAD JUMPER (5MM)	
L611		1-412-527-11	INDUCTOR 15UH	
L612		1-412-519-11	INDUCTOR 3.3UH	
L613		1-412-519-11	INDUCTOR 3.3UH	
L615		1-412-529-11	INDUCTOR 22UH	
L616		1-412-533-21	INDUCTOR 47UH	
L801		1-459-111-00	COIL, DRAM CORE (CDI)	
L802		1-459-104-00	COIL, WITH CORE	
L803		1-420-872-00	COIL, AIR-CORE	
L804		1-429-306-11	TRANSFORMER, HORIZONTAL LINEAR	
L805		1-406-674-11	COIL, CHOKE 3.3MMH	
L806		1-412-529-11	INDUCTOR 22UH	
L809		1-408-417-00	INDUCTOR 47UH	
L810		1-535-465-11	LEAD JUMPER (5MM)	
L811		1-406-978-11	COIL, CHOKE 150UH	
L813		1-412-552-11	INDUCTOR 2.2MMH	
L901		1-408-603-31	INDUCTOR 10UH	
L902		1-408-603-31	INDUCTOR 10UH	
L903		1-408-409-00	INDUCTOR 10UH	
L904		1-408-409-00	INDUCTOR 10UH	
			< IC LINK >	
PS600	⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS601	⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS602	⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS603	⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
			< TRANSISTOR >	
Q501		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502		8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q503		8-729-030-02	TRANSISTOR DTC144ES	
Q601		8-729-025-04	TRANSISTOR 2SC3852A	
Q602		8-729-320-28	TRANSISTOR 2SA1667	
Q603		8-729-805-05	TRANSISTOR 2SC3601-E	
Q604		8-729-024-35	TRANSISTOR 2SC2808STP-R	
Q605		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606		8-729-900-65	TRANSISTOR DTA144ES	
Q607		8-729-119-78	TRANSISTOR 2SC2785-HFE	

D

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REF.NO.	PART NO.	DESCRIPTION			REMARK
Q800	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q801	8-729-017-06	TRANSISTOR 2SC4793			
Q802	8-729-016-32	TRANSISTOR 2SC4927-01			
Q803	8-729-119-80	TRANSISTOR 2SC2688-LK			
Q805	8-729-030-02	TRANSISTOR DTC144ESA			
Q900	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1200	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1201	8-729-029-94	TRANSISTOR DTC143TSA			
Q1202	8-729-029-66	TRANSISTOR DTC114ESA			
Q1203	8-729-029-94	TRANSISTOR DTC143TSA			
Q1204	8-729-029-94	TRANSISTOR DTC143TSA			
		< RESISTOR >			
R500	1-215-457-00	METAL	33K	1%	1/4W
R502	1-249-421-11	CARBON	2.2K	5%	1/4W
R503	1-249-429-11	CARBON	10K	5%	1/4W
R504	1-215-457-00	METAL	33K	1%	1/4W
R505	1-249-382-11	CARBON	1.2	5%	1/4W F
R506	1-535-465-11	LEAD, JUMPER	(5.0MM)		
R507	1-215-888-00	METAL OXIDE	220	5%	2W F
R508	1-216-371-00	METAL OXIDE	1.5	5%	2W F
R509	1-249-443-11	CARBON	0.47	5%	1/4W F
R510	1-249-443-11	CARBON	0.47	5%	1/4W F
R519	1-535-465-11	LEAD, JUMPER	(5.0MM)		
R520	1-215-457-00	METAL	33K	1%	1/4W
R521	1-215-457-00	METAL	33K	1%	1/4W
R522	1-247-863-91	CARBON	22K	5%	1/4W
R523	1-247-863-91	CARBON	22K	5%	1/4W
R524	1-249-425-11	CARBON	4.7K	5%	1/4W
R525	1-249-425-11	CARBON	4.7K	5%	1/4W
R526	1-249-421-11	CARBON	2.2K	5%	1/4W
R527	1-535-465-11	LEAD, JUMPER	(5.0MM)		
R600	1-216-490-11	METAL OXIDE	39K	5%	3W F
R601	1-249-417-11	CARBON	1K	5%	1/4W
R602	1-215-473-00	METAL	150K	1%	1/4W
R603	1-215-898-11	METAL OXIDE	10K	5%	2W F
R604	1-249-420-11	CARBON	1.8K	5%	1/4W
R605	1-216-362-11	METAL OXIDE	0.27	5%	2W F
R606	1-535-143-21	LEAD, JUMPER	(12.5MM)		
R607	1-216-421-11	METAL OXIDE	12	5%	1W F
R608	1-216-365-00	METAL OXIDE	0.47	5%	2W F
R609	1-535-465-11	LEAD, JUMPER	(5.0MM)		
R610	1-215-421-00	METAL	1K	1%	1/4W
R611	1-216-354-11	METAL OXIDE	2.7	5%	1W F
R612	1-249-428-11	CARBON	8.2K	5%	1/4W
R613	1-249-417-11	CARBON	1K	5%	1/4W
R614	1-215-877-11	METAL OXIDE	22K	5%	1W F
R615	1-249-435-11	CARBON	33K	5%	1/4W
R616	1-215-471-00	METAL	120K	1%	1/4W
R617	1-215-901-00	METAL OXIDE	33K	5%	2W F
R618	1-247-863-91	CARBON	22K	5%	1/4W
R619	1-216-425-11	METAL OXIDE	56	5%	1W F
R620	1-260-131-11	CARBON	470K	5%	1/2W
R621	1-216-425-11	METAL OXIDE	56	5%	1W F
R622	1-249-437-11	CARBON	47K	5%	1/4W
R623	1-249-429-11	CARBON	10K	5%	1/4W
R624	1-249-393-11	CARBON	10	5%	1/4W F
R625	1-249-434-11	CARBON	27K	5%	1/4W
R626	1-249-430-11	CARBON	12K	5%	1/4W
R627	1-216-347-11	METAL OXIDE	0.68	5%	1W F
R628	1-249-415-11	CARBON	680	5%	1/4W F

REF.NO.	PART NO.	DESCRIPTION			REMARK
R629 ⚠	1-260-135-11	CARBON	1M	5%	1/2W
R630 ⚠	1-218-265-11	METAL	8.2M	5%	1W
R631 ⚠	1-202-961-11	WIREWOUND	1.8	5%	10W
R632	1-247-807-31	CARBON	100	5%	1/4W
R633	1-247-807-31	CARBON	100	5%	1/4W
R634	1-249-397-11	CARBON	22	5%	1/4W F
R635	1-249-437-11	CARBON	47K	5%	1/4W
R636	1-249-417-11	CARBON	1K	5%	1/4W
R637	1-247-815-91	CARBON	220	5%	1/4W
R638	1-247-863-91	CARBON	22K	5%	1/4W
R639	1-215-435-00	METAL	3.9K	1%	1/4W
R640	1-535-143-71	LEAD, JUMPER	(7.5MM)		
R641	1-535-143-71	LEAD, JUMPER	(7.5MM)		
R642 ⚠	1-202-961-11	WIREWOUND	1.8	5%	10W
R645	1-249-422-11	CARBON	2.7K	5%	1/4W
R646	1-249-377-11	CARBON	0.47	5%	1/4W F
R647	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R649	1-249-426-11	CARBON	5.6K	5%	1/4W
R800	1-249-429-11	CARBON	10K	5%	1/4W
R802	1-249-429-11	CARBON	10K	5%	1/4W
R803	1-247-843-11	CARBON	3.3K	5%	1/4W
R805	1-247-863-91	CARBON	22K	5%	1/4W
R809	1-247-891-00	CARBON	330K	5%	1/4W
R811	1-535-465-11	LEAD, JUMPER	(5.0MM)		
R812	1-249-421-11	CARBON	2.2K	5%	1/4W
R813	1-215-867-00	METAL OXIDE	470	5%	1W F
R814	1-249-411-11	CARBON	330	5%	1/4W
R816	1-216-481-11	METAL OXIDE	1.2K	5%	3W F
R817	1-216-481-11	METAL OXIDE	1.2K	5%	3W F
R818	1-215-883-11	METAL OXIDE	33	5%	2W F
R819	1-216-345-11	METAL OXIDE	0.47	5%	1W F
R820	1-249-403-11	CARBON	68	5%	1/4W
R821	1-215-909-11	METAL OXIDE	47	5%	3W F
R822	1-215-868-00	METAL OXIDE	680	5%	1W F
R824	1-249-420-11	CARBON	1.8K	5%	1/4W
R826	1-260-099-11	CARBON	1K	5%	1/2W
R827	1-249-425-11	CARBON	4.7K	5%	1/4W
R828	1-247-863-91	CARBON	22K	5%	1/4W
R829	1-260-120-11	CARBON	56K	5%	1/2W
R830	1-217-778-11	FUSIBLE	1K	5%	1W F
R831	1-535-465-11	LEAD, JUMPER	(5.0MM)		
R832	1-215-877-11	METAL OXIDE	22K	5%	1W F
R833	1-249-441-11	CARBON	100K	5%	1/4W
R835	1-216-471-11	METAL OXIDE	27	5%	3W F
R836	1-249-439-11	CARBON	68K	5%	1/4W
R837	1-249-427-11	CARBON	6.8K	5%	1/4W
R840	1-247-815-91	CARBON	220	5%	1/4W
R841	1-249-418-11	CARBON	1.2K	5%	1/4W
R842	1-249-441-11	CARBON	100K	5%	1/4W
R843	1-247-891-00	CARBON	330K	5%	1/4W
R846	1-247-893-11	CARBON	390K	5%	1/4W
R847	1-247-897-11	CARBON	560K	5%	1/4W
R848	1-247-863-91	CARBON	22K	5%	1/4W
R849	1-249-429-11	CARBON	10K	5%	1/4W
R850	1-249-425-11	CARBON	4.7K	5%	1/4W
R851	1-215-898-11	METAL OXIDE	10K	5%	2W F
R852	1-249-432-11	CARBON	18K	5%	1/4W
R870	1-216-345-21	METAL OXIDE	1	5%	1W F
R900	1-247-815-91	CARBON	220	5%	1/4W
R901	1-260-311-11	CARBON	39	5%	1/2W

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REF.NO.		PART NO.	DESCRIPTION			REMARK
R902		1-260-311-11	CARBON	39	5%	1/2W
R904		1-249-389-11	CARBON	4.7	5%	1/4W F
R905		1-247-804-11	CARBON	75	5%	1/4W
R906		1-247-804-11	CARBON	75	5%	1/4W
R907		1-247-804-11	CARBON	75	5%	1/4W
R908		1-249-401-11	CARBON	47	5%	1/4W
R909		1-249-429-11	CARBON	10K	5%	1/4W
R910		1-249-422-11	CARBON	2.7K	5%	1/4W
R911		1-249-426-11	CARBON	5.6K	5%	1/4W
R912		1-249-429-11	CARBON	10K	5%	1/4W
R913		1-247-863-91	CARBON	22K	5%	1/4W
R914		1-249-437-11	CARBON	47K	5%	1/4W
R919		1-249-437-11	CARBON	47K	5%	1/4W
R921		1-249-437-11	CARBON	47K	5%	1/4W
R922		1-247-807-31	CARBON	100	5%	1/4W
R923		1-247-815-91	CARBON	220	5%	1/4W
R1200		1-249-425-11	CARBON	4.7K	5%	1/4W
R1201		1-249-434-11	CARBON	27K	5%	1/4W
R1202		1-249-389-11	CARBON	4.7	5%	1/4W F
R1203		1-249-421-11	CARBON	2.2K	5%	1/4W
R1204		1-249-421-11	CARBON	2.2K	5%	1/4W
R1205		1-249-428-11	CARBON	8.2K	5%	1/4W
R1206		1-249-428-11	CARBON	8.2K	5%	1/4W
R1207		1-249-413-11	CARBON	470	5%	1/4W
R1208		1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R1209		1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R1210		1-249-413-11	CARBON	470	5%	1/4W
R1211		1-249-424-11	CARBON	3.9K	5%	1/4W
R1212		1-249-424-11	CARBON	3.9K	5%	1/4W
R1213		1-249-421-11	CARBON	2.2K	5%	1/4W
R1216		1-249-413-11	CARBON	470	5%	1/4W
R1217		1-249-425-11	CARBON	4.7K	5%	1/4W
R1218		1-535-465-11	LEAD, JUMPER (5.0MM)			
R1219		1-249-417-11	CARBON	1K	5%	1/4W
			< RELAY >			
RY600	⚠	1-755-018-11	RELAY			
			< SWITCH >			
S601	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)			
S900		1-692-979-11	SWITCH, TACTILE			
S901		1-692-979-11	SWITCH, TACTILE			
S902		1-692-979-11	SWITCH, TACTILE			
			< SPARK GAP >			
SG801		1-519-422-11	GAP, SPARK			
SG802		1-519-422-21	GAP, SPARK			
			< TRANSFORMER >			
LF600	⚠	1-421-776-11	LFT			
LF601	⚠	1-421-776-11	LFT			
T601	⚠	1-429-605-11	TRANSFORMER, CONVERTER			
T800		1-426-981-11	TRANSFORMER, FERRITE (PMT)			
T803	⚠	8-453-220-11	TRANSFORMER ASSY, FLYBACK (NX-1670/U2B4)			
T804		1-437-090-31	HDT			
			< THERMISTOR >			
THP600	⚠	1-809-827-11	THERMISTOR, POSITIVE			

REF.NO.		PART NO.	DESCRIPTION			REMARK
		*A-1644-070-A	VM, BOARD COMPLETE **********			
			< CAPACITOR >			
C1701		1-126-933-11	ELECT	100MF	20%	16V
C1702		1-128-551-11	ELECT	22MF	20%	25V
C1703		1-126-933-11	ELECT	100MF	20%	16V
C1704		1-107-357-11	FILM	0.47MF	5%	100V
C1705		1-107-638-11	ELECT	33MF	20%	160V
C1706		1-104-999-11	FILM	0.1MF	5%	200V
C1707		1-137-397-11	FILM	0.047MF	5%	100V
C1708		1-137-364-11	FILM	0.001MF	5%	50V
C1709		1-137-364-11	FILM	0.001MF	5%	50V
C1710		1-102-074-00	CERAMIC	0.001MF	10%	50V
C1720		1-107-667-11	ELECT	2.2MF	20%	160V
C1721		1-137-397-11	FILM	0.047MF	5%	100V
C1722		1-126-934-11	ELECT	220MF	20%	16V
C1723		1-161-830-00	CERAMIC	0.0047MF		500V
C1725		1-128-551-11	ELECT	22MF	20%	25V
C1726		1-126-934-11	ELECT	220MF	20%	16V
			< CONNECTOR >			
CN1015		*1-568-880-51	PIN, CONNECTOR 5P			
CN1718		1-774-418-11	CONNECTOR, BOARD TO BOARD 8P			
			< DIODE >			
D1701		8-719-991-33	DIODE 1SS133T-77			
D1702		8-719-110-88	DIODE RD39ES-B2			
D1703		8-719-110-88	DIODE RD39ES-B2			
			< COIL >			
L1701		1-408-409-00	INDUCTOR	10UH		
L1702		1-408-403-00	INDUCTOR	3.3UH		
L1703		1-408-409-00	INDUCTOR	10UH		
L1704		1-408-418-00	INDUCTOR	56UH		
			< TRANSISTOR >			
Q1701		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1702		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1703		8-729-017-05	TRANSISTOR 2SA1837			
		*4-368-683-21	SPRING, TRANSISTOR (Q1703)			
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q1703)			
Q1704		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1706		8-729-017-06	TRANSISTOR 2SC4793			
		*4-368-683-21	SPRING, TRANSISTOR (Q1706)			
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q1706)			
Q1708		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1709		8-729-119-78	TRANSISTOR 2SC2785-HFE			
			< RESISTOR >			
R1701		1-249-417-11	CARBON	1K	5%	1/4W
R1702		1-249-417-11	CARBON	1K	5%	1/4W
R1703		1-249-421-11	CARBON	2.2K	5%	1/4W
R1704		1-249-415-11	CARBON	680	5%	1/4W
R1705		1-247-815-91	CARBON	220	5%	1/4W
R1706		1-247-815-91	CARBON	220	5%	1/4W
R1708		1-249-412-11	CARBON	390	5%	1/4W
R1712		1-260-311-11	CARBON	39	5%	1/2W
R1713		1-249-384-11	CARBON	1.8	5%	1/4 F
R1714		1-249-414-11	CARBON	560	5%	1/4W F

VM

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R1715	1-249-432-11	CARBON	18K	5%	1/4W
R1716	1-249-417-11	CARBON	1K	5%	1/4W F
R1717	1-216-476-11	METAL OXIDE	180	5%	3W F
R1718	1-249-432-11	CARBON	18K	5%	1/4W
R1719	1-249-384-11	CARBON	1.8	5%	1/4W F
R1720	1-249-400-11	CARBON	39	5%	1/4W F
R1721	1-249-414-11	CARBON	560	5%	1/4W
R1722	1-249-401-11	CARBON	47	5%	1/4W
R1724	1-249-400-11	CARBON	39	5%	1/4W
R1725	1-216-451-11	METAL OXIDE	120	5%	2W F
R1728	1-249-413-11	CARBON	470	5%	1/4W
R1729	1-249-413-11	CARBON	470	5%	1/4W
R1730	1-249-422-11	CARBON	2.7K	5%	1/4W
R1731	1-249-411-11	CARBON	330	5%	1/4W

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REF.NO.		PART NO.	DESCRIPTION	REMARK
			MISCELLANEOUS	
			**********	
	⚠	1-411-893-11	COIL, DEGAUSSING	
		1-452-032-00	MAGNET, DISK; 10MM Ø	
		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	⚠	1-453-220-11	TRANSFORMER ASSY, FLYBACK(UX-1604A2)	
		1-505-782-11	SPEAKER (8CM)	
	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
		1-693-338-11	TUNER (TUVIF) (AEP) (KV-28WF1A/28WF1D/28WF1E/28WF1K/28WF1R)	
		1-693-340-11	TUNER (TUVIF) (FR) (KV-28WF1B)	
		1-693-339-11	TUNER (TUVIF) (UK) (KV-28WF1U)	
	⚠	1-765-286-11	CORD, POWER 2.5A/250V (KV-28WF1A/28WF1B/28WF1D/28WF1E/28WF1K/28WF1R)	
	⚠	1-776-204-12	CORD, POWER (FILTER) 3A/250V (KV-28WF1U)	
	⚠	8-451-434-11	DEFLECTION YOKE (Y28GIAM)	
	⚠	8-453-005-51	NECK ASSY, (NA297-M5)	
V901	⚠	8-737-773-05	PICTURE TUBE (SD-284T)(W66LGY011X)	

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		ACCESSORIES AND PACKING MATERIALS	
		**********	
	4-203-891-41	MANUAL, INSTRUCTION (KV-28WF1A)(ITALIAN)	
	4-203-891-51	MANUAL, INSTRUCTION (KV-28WF1B) (FRENCH/GERMAN/ITALIAN/DUTCH)	
	4-203-891-11	MANUAL, INSTRUCTION (KV-28WF1D) (DUTCH/GREEK/ENGLISH/GERMAN)	
	4-203-891-71	MANUAL, INSTRUCTION (KV-28WF1E)(SPANISH)	
	4-203-509-81	MANUAL, INSTRUCTION (KV-28WF1E) (PORTUGUESE/FINNISH/DANISH/NORWEGIAN/ SWEDISH)	
	4-203-891-91	MANUAL, INSTRUCTION (KV-28WF1K/28WF1R) (ENGLISH/CZECH/POLISH/RUSSIAN/BULGARIAN)	
	4-203-891-61	MANUAL, INSTRUCTION (KV-28WF1U) (ENGLISH)	
	*4-203-885-01	INDIVIDUAL CARTON	
	*4-203-883-01	CUSHION (LOWER) (ASSY)	
	*4-203-884-01	CUSHION (UPPER) (ASSY)	
	*4-029-168-01	BAG, PROTECTION	
		REMOTE COMMANDER	
		**********	
	1-473-693-11	COMMANDER, STANDARD TYPE (RM-839)	

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9-974-957-01

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Service Promotions Div.

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